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QUALITY

HEN you incorporate Ungerer perfuming materials into any of your Soap products, you are insuring odor persistence. The enduring quality inherent in all Ungerer products guarantees that result. Our strict adherence to these quality standards suggests in many ways the classic sculptory of ancient Grecian times, which was in that age a leading exponent of Enduring Quality.

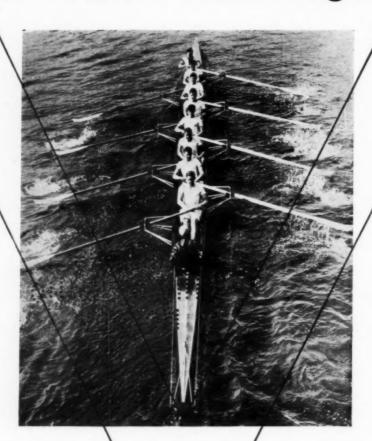
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EAMWORK is essential in business today as never before in order to back up the war effort. A healthy industry with everyone pulling together is absolutely necessary for final Victory.

We are making every effort to co-operate with our customers to the fullest extent in these trying times in order to turnish them with the necessary materials wherever possible.

Where, because of the necessity for the use of raw materials in war work it is impossible to supply them any longer, we know that we have the full co-operation of our customers in aiding us to solve the problem for them.

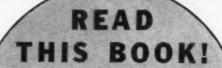


Aromatics Division
GENERAL DRUG COMPANY

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Study its contents carefully . . . help yourself to

inWartime

A note on your letterhead will bring your book by return mail.

> It's very possible that you will stay in business even if you don't read "Selling Sanitary Chemicals in Wartime"... chances are, you

have at your own instigation taken many of the wartime steps recommended therein.

Questions and Answers on current marketing problems ... compiled by

FILH HAUS.

But if you're not quite satisfied with the way you've been able to cope with priorities, rationing, labor shortages and other current merchandising problems . . . if you feel your business needs a wartime shot in the arm . . . we'll be glad to send you a copy of "Selling Sanitary Chemicals in Wartime," no obligation of course.

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Liquid Soaps, Floor Seals, Floor Treatments, Deodorant Blocks, Liquid Deodorants, Plumbing Specialties, Special Cleaners, Self-Polishing Waxes, Powdered Waxes. Oil Soaps, Liquid Cleaners, Disinfectants, Insecticides, Metal Polishes, Furniture Polishes, Deodorant Block Holders, Soap Dispensers.

March, 1943

Say you saw it in SOAP!



.... AND THERE'S QUITE A DIFFERENCE in Soap Perfuming, too!

The creating of soap perfumes at best, is a specialist's job. It requires a happy combination of soap technician and master perfumer, plus long experience. These days, with fewer materials to choose from, the job is doubly difficult. So depend on a competent perfumer whose experience in the soap field is broad, to solve your problems in soap scenting. Our perfumers are rich in such specialized experience.

SANITARY CHEMIC

MARCH 1943

SANITARY Products Section, which forms a part of every issue of SOAP, begins on page 71.



RKC

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Published by

MAC NAIR-DORLAND COMPANY, INC. 254 WEST 31st STREET NEW YORK, N. Y.

Subscription rate, \$3.00 per year. Foreign, including Canadian, \$4.00. Copy closing dates—22nd of month preceding month of issue for reading matter and 10th of month preceding month of issue for display advertising. Reentered as second-class matter, Feb. 9, 1938, at Post Office, New York, under act of March 3, 1879. Mail circulation, February, 1943, issue 3,405 copies. Total circulation, 3,600.



P. S. If you have a problem in wartime packaging—call in S&S! We may be able to help you, too...Perhaps, by adapting your existing equipment to converted packages or new product . . . Or, where your product is waressential, by supplying the new machines for its rapid, low-cost packaging. Use our service freely; there's no obligation.



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For more than forty-five years the name of Chuit, Naef has been synonymous with the production of the highest quality group of synthetic and aromatic chemicals obtainable. Today, as then, this reputation continues unmatched.

Throughout these years the Chuit, Naef organization has expanded its products to the point where they now rank as the most complete line of perfume raw materials available to the toilet goods, perfume extract and soap fields. The As sole United States agents, let us convince you of the remarkable adaptability of our products to your line—and our ability to deliver!



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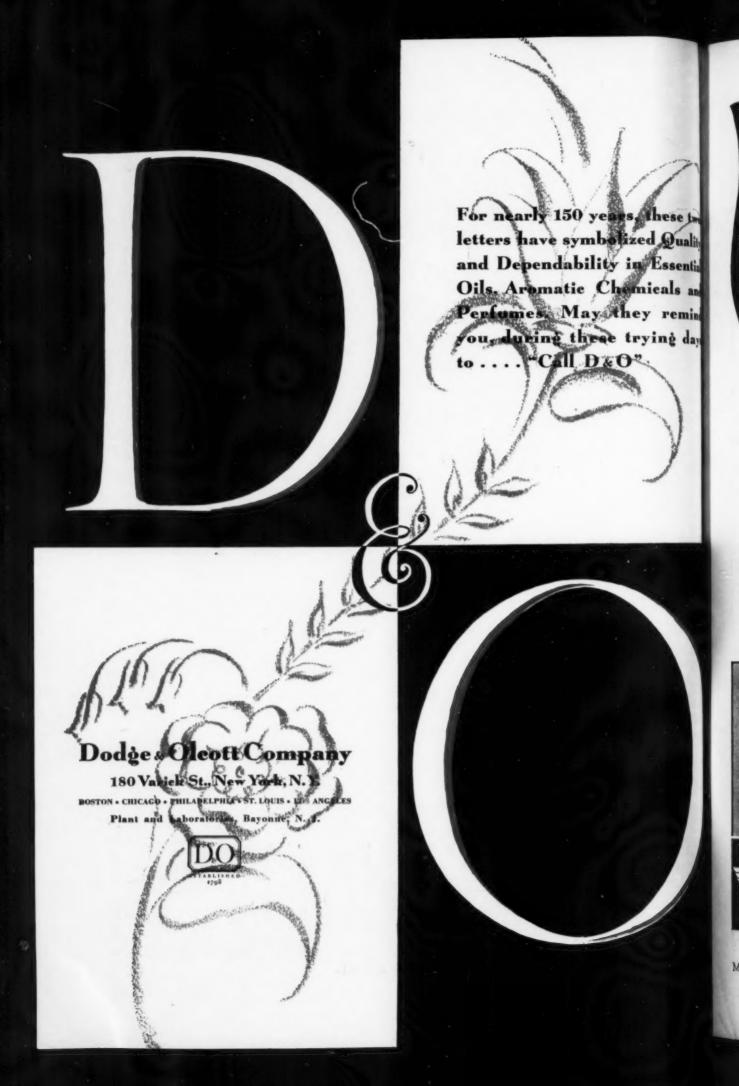
FIRMENICH

March, 1943

943

Say you saw it in SOAP!

7



Warning to Jobbers

PEDDLERS ARE CHISELING IN ON ONE OF YOUR BIGGEST CLEANER MARKETS

with REAT NOW

THE CREAMY ALL-PURPOSE CLEANER

It's An Ugly Story ... Peddlers are muscleing-in on YOUR cleaner market. They're pushing a cream type cleaner that will rob you of your juiciest Hotel and Institution business—and snatch your factory and War trade for good measure—if you don't stop these peddlers now with a better cream cleaner of your own.

HYSAN has this better cleaner for you. We call it KEEM (or we'll supply labels with YOUR brand name). KEEM is a new no dust, sneeze proof, anti-scratch

CREAM CLEANER . . . that's easy on maids' hands and cleans everything from bathroom to bar fixtures . . . cleans mirrors, lavatories, silverware, walls and tile, marble work, enamel surfaces—the whole works!

We have given you KEEM just in time to stop the peddler competition cold and return this valuable trade where it belongs—to YOU, the legitimate jobber. Remember, responsible buyers are always glad to switch back to responsible suppliers. Send for sample and

Here's how the peddler of cream cleaners steals YOUR cleaner market

THIS IS WHAT HE SAYS

"...my cleaner doesn't chap and rough up maids' hands...it has no grit to scratch—no dust to make them sneeze, cough and quit their jobs...it works double fast, can't clog drains and does the work of 10 separate cleaners..." STOP THIS PEDDLER COLD!

Send today for your sample of KEEM—a creamy cleaner that is so superior to peddler-sold types that it tosses them out on their ear—as fast as you can demonstrate it. That's because KEEM does what the peddlers can only claim. Besides, KEEM is blended with Per-germ—the famous HYSAN disinfectant-deodorant with the matchless fragrance everybody likes.

WIRE OR CLIP COUPON FOR SAMPLE



HYSAN PRODUCTS COMPANY . 58 E. CULLERTON ST., CHICAGO

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Scarcity of floral oils . . .

Present dwindling supplies of natural floral essences emphasize the value of high quality substitutes.

Synthetic floral essences can be used to replace the natural oils with full satisfaction and marked success in numerous products, — toilet soaps, shampoos, shaving creams, powders, creams, and many others.

In fact, in many products the newer synthetic floral essences are to be *preferred* for the manner in which they reproduce the true fragrance of the living flowers in the finished product,—not to mention uniformity of quality and odor fidelity, and their economy under preset conditions.

Let us tell you more about these newer substitutes as an answer to the growing scarcity of natural floral oils.

NORDA Essential Oil and Chemical Co., Inc.

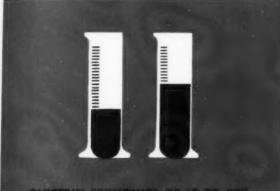
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POLY-PALE RESIN

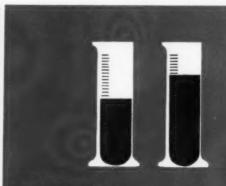
(Hercules Polymerized Rosin)

Extends Critical Materials



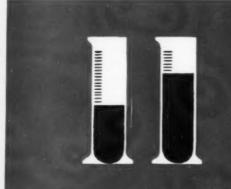
GLYCERIN ECONOMIES OF 10 TO 30%

Less glycerin is needed when Poly-pale re-places natural rosin for ester gums and for maleic or phenolic modified resins of high melting points and viscosities, good color and



MALEIC ANHYDRIDE EXTENDED 12 to 28%

As much as 28 per cent less maleic anhydride is required with Poly-pale than with natural rosins to make modified malente resins of equivalent melting point.



PHENOLIC RESINS EXTENDED UP TO 25%

Modified phenolic resins of high melting point and good color are produced with a 25 per cent saving in phenol-aldehyde con-

*Reg. U. S. Pat. Off. by Hercules Powder Company



HERCULES

CHEMICALS FOR INDUSTRY

98-103°C. Melting Point (drop) . . . Acid No. 146-153 Saponification No. 157-160 Color (U. S. Standard) . . N-WG Refractive Index at 20°C. . 1.5440 Gasoline Insoluble 0.1% max. 0.01% Ash Viscosity-60% in toluene . 22 cps. Density (at 25°C. against water) 1.0710

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961 Market Street, Wilmington, Delaware

Please send me the 2nd edition of "Poly-pale Resin."

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MUSKS

for your every requirement AMBRETTE · KETONE · XYLOL

PAST PERFORMANCE—AN INDEX FOR THE FUTURE

oday, prices of synthetic Musks are considerably lower than during the last war!

And Givaudan has maintained stability in current price schedules at very near their pre-war levels.

As pioneer domestic producers of these important perfume materials, Givaudan has long supplied Musks which have set the standards for Purity and uniformity throughout the trade.

If you are in the market for Musks, we invite your inquiry.

GIVAUDAN-DELAWANNA, INC. 330 WEST 42ND STREET, NEW YORK, N. Y.

OUR PLANT FACILITIES ARE AVAILABLE FOR ANY FURTHER CONTRIBUTION WE MAY MAKE TO PRODUCTION OF MATERIALS FOR THE WAR EFFORT

REMEMBER THE 18TH ANNUAL DRUG, CHEMICAL AND ALLIED TO ALLIED GINNER, WALDERS-ASTONIA MOTEL. THURNDAY, MARCH 5TH. RENEMBER THE ISTR ANNUAL DRUG, CHEMICAE AND ALLIED TRADES DINNER, WALDORP, ASTORIA HOTEL, THURNDAY, MARCH STR.



AMERICA'S industrial birth rate is zooming, too. Spurred by war, such wonder children as synthetic rubber, plastics, dehydrated foods, air freighters, have emerged from blueprints and test tubes to reality.

The influence of victory's offspring is far reaching, fast growing. It means new methods and new processes in many different fields. To manufacturers meeting these changes, the technical assistance of the Wyandotte Chemicals Corporation can be of great value.

Wyandotte men are working with more than fifty different industries—expediting the handling of alkalies in textiles, caustic in explosives, chlorine in plastics. They are abreast of developments which . . . once seemingly remote . . . may now have a direct bearing on the "duration" uses and post-war prospects of your own products.

Whether your product is a "war baby" or is long established, the broad experience and research background of Wyandotte experts are freely offered. There is no obligation for their assistance.

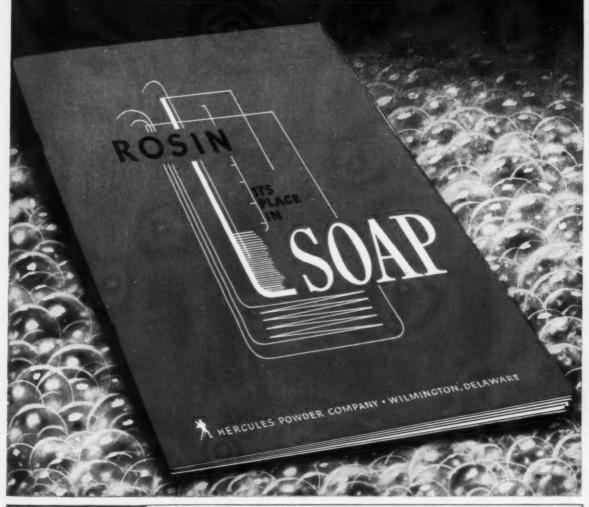
• Wyandotte Chemicals Corporation consolidates the resources and facilities of Michigan Alkali Company and The J. B. Ford Company to better serve the nation's war and post-war needs.



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Valuable 24-page copyrighted report featuring results of 3-year laboratory study. Covers detergency, suds value, solubility tests on white soaps, laundry bar soaps, and powdered soaps. Supply limited. MAIL COUPON TODAY.





HERCULES POWDER COMPANY

NAVAL STORES DEPARTMENT

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Please mail me FREE copy of your new 24-page report: ROSIN-ITS PLACE IN SOAP.

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* POLISHES, ETC.

VEN when oil of citronella was Clow in price and easy to obtain, AVONELLA was a reliable favorite. A great many manufacturers preferred its liner, cleaner odor, its uniform quality and consistent economy. And now that Citronella is so high in price and difficult

zer, JAVONELLA is more important WRITE FOR SAMPLES

Manufacturers of AROMATIC CHEMICALS, NATURAL DERIVATIVES, PERFUME AND FLAVOR OILS



Can you imagine a Soap Company running an advertisement like this in times of peace? No, you probably cannot. But . . . we're at war and soap must be conserved.

The Buckeye Soap Conserving System shown here is easily installed and there is no chance for undissolved soap to be smeared on the surface being washed. It produces a uniform concentrated soap solution. (There is actually an entire tank car of washing solution concentrated in a drum of soap.)

FURNISHED WITH

Buckeye Vegetable Oil Soap	65%
Buckeye Pearl Hard	65%
Buckeye Concentrated Oil	65%
Buckeye Scrubace	65%
Buckeye Extra Hard Green	80%
Davies Extra Hard Green	75%

OPERATION: If you want to use the drum immediately after installation, fill with water and draw out 2 or 3 times, pouring the solution drawn out back into the drum. This permits its use 10 minutes after installation. However, it is best to fill the drum with water and let it stand 3 or 4 hours before using to insure uniform mixture of soap solution.

DIRECTIONS FOR USE: I gallon of concentrated soap solution will make up 40 gallons of washing solution of the correct consistency. (Where water is extremely hard, more soap solution must be added.) For particularly dirty surfaces, the washing solution can be regulated by increasing the soap solution as required.

drums (approximately 480 lbs. each)

1/2 drums (approximately 250 lbs. each)

1/4 drums (approximately 125 lbs. each)

THE DAVIES-YOUNG SOAP CO., DAYTON, OHIO

March, 1943

943

TC.

Say you saw it in SOAP!

17

Toggle Motion for SOAP

and

EXPLOSIVES!

WE have long stressed the incomparable advantages of Toggle Motion for pressing soap, and have proven these claims by the performance of our presses.

The value of Toggle Motion is now demonstrated even more dramatically in the automatic detonator loader we have invented for Ordnance use. Automatic detonator loading had previously been regarded an impossible task: Among other delicate operations, the most sensitive powder used in modern warfare must be handled and compressed at many thousand pounds per square inch.

We adapted the Toggle Motion of our soap presses to all compressing operations on this machine. Instead of the sudden slap of pneumatic and other presses used on hand loading lines, the Toggle operated plungers approach the powder slowly. Great pressure is exerted gently, silently, without strain to the machine or danger of explosion.

In brief contrast to manual loading lines, this machine loads detonators better, faster, with complete safety, and with less than one-third the labor. Without Toggle Motion it could not have met the stringent Ordnance requirements of safety, production, and adherence to close tolerances.

Nor can any soap meet the demands of your sales manager without the advantages of Toggle pressing. The gradual pressure gives soap time to adapt itself to engraving and other die recesses, and brings out clear, sharp letters and designs. Toggle presses produce the finest possible finish and create a desire for possession never achieved by any other means.

R. A. JONES & COMPANY, Inc.

P. O. BOX 485

CINCINNATI, OHIO

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EDITOR

F we have to get down to "bedrock" as the result of an especially long war, the American public could get along on 15 pounds of soap per capita per year, which figure is placed at 67 per cent of 1939 American soap consumption by the Office of Civilian Supply of the WPB in a recent estimate on a list of "minimum annual civilian requirements." Present rate of consumption is believed to be close to 27 pounds per capita. But in reporting on how far soap consumption might be cut down in a pinch, the OCS also stated that "the production of soap is inseparably connected with the production of glycerine, and the requirements for glycerine are most likely to control the

Then why in the name of good common sense was any such figure as 67 per cent of 1939 soap consumption even mentioned as an estimate by OCS? It has no practical significance, and conceivably could start a public soap-buying stampede. The old rule still applies,—no soap, no glycerine! And any estimate which implies a further reduction in glycerine output while the country is at war, we feel, is purely hypothetical as well as meaningless.



ITH soap fats scarce and likely to become scarcer before the year is over, there remain few sources not already tapped which might furnish additional supplies for the soap kettle. Although some increased quantities of refining by-products and foots may be recovered through larger production and refining operations, the largest po-

tential source of additional soap fat continues to be waste from household, restaurant, hotel and food processing establishments. But collection of salvaged fats has proved to be a tough nut to crack. In spite of W.P.B. pressure, quantities recovered over the past six months have averaged 2,000 tons per month of household grease when they might have been about four times this amount.

Glad we are to note that the Waste Fat Salvage Committee has just got under way with a new campaign aimed to collect 100,000 tons per year and that approximately \$400,000 has been appropriated by the soap and glycerine industries for the purpose. As we see it for 1943, salvaged fats represent the one and only "out" for the soap industry to augment its reduced supply and prevent a more acute scarcity later in the year. Every soaper and renderer the country over should lend a hand to the new campaign. A pound of waste grease today is more important than two pounds were a year ago.



acid content of all soap products and the substitution of non-fat builders and fillers is reported under consideration by WPB. With a view to expanding the output of soap products from the same amount of fats and oils, WPB may require the addition of rosin, alkali builders, and inert fillers to the extent of 10 per cent in powders and granules, five per cent in chips and flakes and two per cent in toilet soaps. In this way, WPB hopes to make up for reduced fat and oil supplies

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to the extent of some 150,000,000 to 250,000,000 pounds yearly of finished soap products. Thus, WPB plans not only to augment present visible supplies of fats, but to make those supplies go four to six per cent further.

WPB is believed to hold that this stretching of fat supplies will result in only an incidental reduction in quality, and that it will obviate the necessity later of reducing production further to a point below the present 84 per cent. Reaction of soapers to the plan is mixed. Some see drawbacks, particularly manufacturers of white soaps, and some producers of powders and granules who claim that the rosin content would change the character of their soaps. Others welcome the idea as a means of permitting them to keep up production if fat supplies decline further. All told, it is a subject for deep and serious consideration where judgment cannot be passed too quickly. It may not be too pleasant to contemplate today, but it may be preferable to some other more drastic curtailment later.



in legislative circles and among certain government bureaus in Washington is evident and has been evident for a number of years. Unwarranted, we feel, but nevertheless a fact, the industry has been the recipient of much unwelcome attention by government officials and a "bad press" over the past two decades. Perhaps little has ever been done to find out why the soap industry as a unit continues unpopular and why it would appear that few opportunities have been missed to take a slap at the industry when the occasion presents itself to those in official positions.

That any number of farm congressmen have over the years not hesitated to picture the soap industry as an octopus sucking its oils and fats from the life stream of the American farmer at starvation prices, we know. When it has come to new laws, regulations, restrictions, activity of the Federal Trade Commission, Food, Drug and Cosmetic authorities, and the like, soap manufacture has usually received early and prominent consideration. A search for reasons finds few, but it does confirm nevertheless that a certain hostility exists.

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Many factors may be involved in an antisoap-industry attitude in Washington, all parts of a more or less complicated situation which has taken a number of years to develop. But there have been some factors which seem calculated to arouse distrust and engender hostility. While soap advertising may have justified the means to an end, it has not made friends in Washington. Its sincerity, honesty, good taste, and overpowering quantity have too often been criticized. Publication of earning statements, where such is obligatory in the case of a few large soapers, has given the impression that the soap industry is literally coining money. That these earning statements have been misinterpreted and misunderstood, does not alter the fact that they have at the same time helped to build up this "octopus" idea in Congress and else-

Although soap manufacturers have upon occasion during the past ten years met in open forum, most important deliberations involving the affairs of the industry during this period have been behind closed doors with the newspapers and other outsiders uniformly excluded. That this has been justified of late by wartime discussions of glycerine and soap rationing is quite evident. But it does not explain over the years the dearth of news from soapers generally, the sort of facts so widely handed out to the papers by other important industries. In our opinion, this has been part of a faulty public relations policy which to a considerable degree may be responsible for the generally "bad press" which the soap industry has received. From long observation, we conclude that to the bureaucratic, congressional, and newspaper minds, apparent secrecy is proof positive that there is something to hide.

In spite of its unpopularity in Washington, the American soap industry has not failed to show broad progress over the past decade. We can think of no industry which has done a finer job in giving the consumer ever more and better products for less money. But these accomplishments appear to be ignored or overshadowed by suspicion and distrust born of misunderstanding rather than fact. Conceivably, a time might come when this latent hostility could at a psychological moment develop into a major embarrassment with serious repercussions which could steal away quickly the fruits of this progress.

In the feeling that the time is ripe for the American soap industry to throw a searchlight on its public relations policies,—including much of its advertising,—we are not alone. Whether the industry as a whole will admit it or not, present policy is doing soapers no good in Washington, is keeping unwarranted suspicion alive and supplying critics with the very type of ammunition which they seek. Smugness is more dangerous than ever when it makes an experienced mariner feel that he can ignore the storm

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HE rumpus over "victory soap" in Puerto Rico a few months ago was something of a tempest in a teapot. But the thinking which led officials of the Puerto Rican Government to arrange importation of unbranded "victory soap" to undersell and replace well-established brands in that market, was vicious as well as warped. That the manufacturers of the branded soaps had supplied that market for years to the apparent satisfaction of Puerto Rican users, that the users preferred the well-known soaps to some unbranded soap of questionable ancestry,—these facts quite evidently were ignored in the crass attempts of governmental theorists to jam collectivism

down the throats of Puerto Rico's popula-

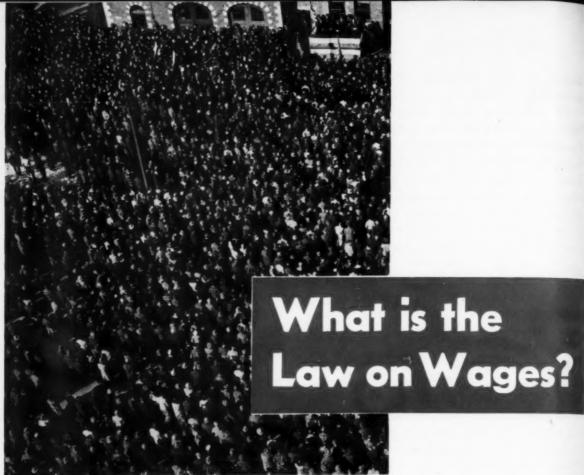
The significance of this "victory soap" thing is far more important than a squabble over a purchase of soap might reveal. It illustrates quite clearly that there are those in high government places, in Washington as well as Puerto Rico, who put no stock in the sanctity of brand names and trade marks, and who if they had their way would wipe all well-known brands off the market. Steeped in socialistic theory, they dislike free enterprise, and hold that advertising and selling of branded goods are uneconomic and tend to create monopolies. They advocate only unadvertised, unbranded goods meeting government standards.

By the thousands of firms in this country who have invested millions in developing and establishing markets for branded products, the preaching of these economic theorists which occasionally breaks out in cases, like this "victory soap" fracas, is not to be wisely ignored. Just as these proposals are vicious and confiscatory, so should the defense against them by brand owners be an equally vicious attack on their sponsors. They show no quarter in their attacks and in turn should be shown none.

This "victory soap" thing is just the beginning if these economic crack-pots would have their own way. But, they should be hung in the public square of American industry as a warning to others of similar ilk that as long as there is free enterprise in this country, brand owners intend to protect their property and treat in kind those who attack them.



ARGE glycerine users are un-easy over talk of reduced soap production. At the first sign of insufficient glycerine for essential war purposes, we look for pressure of almost explosive proportions to push up production even if edible oils and fats may have to be used for the purpose.



General Electric Co.

LTHOUGH the Federal Wage and Hour Law, known as the Fair Labor Standards Act, had been in effect for four years on October 24 last, there are still employers, employes and a good part of the general public who are not too familiar with the intent and operation of this law. Inasmuch as labor problems are constantly arising and this law has been in effect for several years, a discussion of certain features may aid in clarifying some points which are sometimes misunderstood. Basically the law says that employees engaged in interstate commerce or the production of goods for interstate commerce must be paid not less than 30 cents an hour and not less than time and a half their regular rates of pay for all hours worked beyond 40 in a workweek. There is no limitation whatever on the number of hours employees may work, provided "overtime begins at 40."

In addition, wage orders issued by the Administrator of the Fair Labor Standards Act have fixed wage minima that range from 32½ to 40 cents an hour in some 50 industries. In every case these wage orders are based on the recommendation of special industry committees appointed by the Administrator and equally representing employers and employees in the industry and the public. These committees study economic and competitive conditions in the industry and recommend the highest rate up to 40 cents an hour

which will not seriously curtail employment.

One such wage order, effective July 7, 1941, established a minimum wage rate of 40 cents an hour in the drug, medicine and toilet preparations industry. Among other products, the definition of the industry includes "the manufacture or packaging of dentifices, cosmetics, perfume, or other preparations designed or intended for

Clarification of a few points sometimes misunderstood in the Wage and Hour Law, and in the Walsh-Healey Act

By William B. Smith

U. S. Department of Labor

external application to the person for the purpose of cleansing, improving the appearance of, or refreshing the person,

"Provided that this definition shall not include the manufacture or packaging of shaving cream, shampoo, essential (volatile) oils, glycerine and soap, or the milling or packaging without further processing of crude botanical drugs."

Events since Pearl Harbor have given added importance to another Federal law dealing with labor standards,—the Walsh-Healey Public Contracts Act. This Act applies generally to U. S. Government contracts for materials, the manufacture or furnishing of supplies, articles and equipment in excess of \$10,000 and sets standards of minimum wages, overtime compensation, child labor and safety and health and prohibits the employment of convict labor in the fulfillment of contracts subject to the Act.

The minimum wages required under the Walsh-Healey Act are those which the Secretary of Labor has determined to be the prevailing minimum wage for specific industries and specific localities. So far such wage determinations have been made for some 56 industries with wage rates that range from 30 to 70 cents an hour. Two determinations may be of direct interest to readers of this magazine.

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The first, effective August 3, 1939, sets a minimum wage of 40 cents an hour for the following products furnished under contracts subject to the Walsh-Healey Act:

Dentifrices, cosmetics, perfume, or other preparations designed or intended for external application to the person for the purpose of cleansing, improving the appearance of, or refreshing the person; but not including shaving cream, shampoo, essential (volatile) oils, glycerine and soap, or the milling or packaging without further processing of crude botanical drugs.

The second minimum wage determination, effective August 14, 1939, fixes a minimum wage of 40 cents an hour for these products: Soap in bars, cakes, chips, and flakes, and in granulated, powdered, paste, and liquid form and glycerine; cleansers containing soap, scouring powders, and shaving soaps and creams containing soap, and washing compounds containing soap.

Basic straight-time hours of work under the Walsh-Healey Act are eight in any one day or 40 in any one week. Overtime is permitted, of course, if time and one-half the basic rate is paid for all hours worked beyond the prescribed limits. For example, an employee whose total workweek consisted of four 10-hour days would be entitled to eight hours at time and one-half under the Walsh-Healey Act, but under the Wage and Hour Law, which makes the workweek its standard, he would not be entitled to such overtime since his hours of work in that week did not exceed

Where an employee worked, let us say, five 10-hour days and one fivehour day during a week, he would be entitled to 15 hours at time and onehalf under either law.*

Heretofore the Walsh - Healey Act generally prohibited the employment of boys under 16 and girls under 18 years of age. In order to facilitate the production of war materials, a recent exemption granted by the Secretary of Labor now permits the employment of girls between the ages of 16 and 18 years of age in any industry. However, these girls may not work more than eight hours in any one day, or between the hours of 10 p.m. and 6 a.m. And they are not to engage in dangerous or hazardous occupations.

Nowadays, with the toll of industrial accidents mounting, the safety and health features of the Walsh-Healey Act take on new importance. This Act requires that goods supplied on a Government contract be manufactured or handled under safe and sanitary working conditions. In locations where State laws establish safety and health standards, observance of such regulations will be taken as prima facie evidence that employers are in compliance with these provisions of the Walsh-Healey Act. The agencies charged with enforcing the Wage-Hour and Walsh-Healey Laws cooperated closely in the past. To further facilitate the work of administration and enforcement, the two agencies have been merged under an order of the Secretary of Labor. Now called the Wage and Hour and Public Contracts Divisions of the U. S. Department of Labor, the combined Divisions are directed by L. Metcalfe Walling, the present head of the Wage and Hour Division, who was also the first and only Administrator of the Public Contracts Division.

This consolidation has effected a considerable financial saving and in addition, employers who are subject to both Acts are spared the necessity of dealing with two inspectors. The joint staffs now use the field and regional offices of the Wage and Hour Division, strategically placed from coast to coast.

WITH the general features of both laws in mind, let us answer some questions that have arisen. Suppose, for instance, that a dealer in soaps and other washing compounds has a manufacturer deliver goods directly to the Federal Government or one of its agencies? In that case he will be considered an agent of the manufacturer and the latter's employees will be subject to the provisions of the Walsh-Healey Act while they are engaged in any operation necessary to the fulfillment of a Government contract above

In cases where a manufacturer buys materials to be used in producing the commodity called for by his contract and it is a regular practice in his industry to purchase such supplies and not to manufacture them, the work performed by the vendor is not subject to the Act.

Nothing in the Walsh-Healey Act prevents any person from meeting his Government contract out of stock on hand or manufactured before the contract was let. Thus it does not apply retroactively. The Act does apply, however, to employees who do further work on such material, either in processing or packing and shipping the

^{*} Employers who enter into certain collective bargaining agreements with their employees pursuant to provisions set forth in the Fair Labor Standards Act, may employ them up to 12 hours a day or 56 hours a week without the payment of time and a half for overtime.

goods after a contract has been awarded.

Contracts which exceed \$10,000 come within the Walsh-Healey Act whether the material is delivered in installments or in one lot. Where a person bids on several items with an aggregate value above \$10,000 but receives an award totaling less than \$10,000 his contract will not be subject to the Act.

Not all employees who fall within the general coverage of these Acts are subject to the wage and hour provisions, however. Thus Section 13(a) (1) of the Fair Labor Standards Act exempts from its minimum wage and overtime provisions any person employed in an "executive, administrative, professional, or local retailing capacity, or in the capacity of outside salesman," as these terms are defined and delimited by the Administrator in Title 29, Chapter V, Code of Federal Regulations, Part 541.†

Without discussing all of the requirements for exemption in these categories, it may be said that executive employees must be paid a salary of at least \$30 a week to qualify for exemption; for administrative and professional employees the salary test is \$200 monthly, except in the case of lawyers and physicians, for whom there is no salary requirement. There is no salary test for outside salesmen. It should be emphasized that in addition to the salary requirements, the duties of these employees must coincide fully with the official definition given in the regulations.

In general, the Walsh-Healey Act does not apply to office and supervisory employees, to custodial employees or to certain maintenance workers. A foreman who does no manual work and has no direct physical contact with the goods furnished the Government will be exempt even if he occasionally lends a hand in the course of his purely supervisory duties.

This Act does apply to employees engaged in occupations connected with the manufacture, fabrication, testing, handling or shipping of goods furnished the Government in amounts above \$10,000. Thus it will apply to laboratory technicians, draftsmen, (except supervisory draftsmen), tool and die makers and other employees whose work is closely associated with the productive processes involved in the manufacture of products required by the Government.

The terms "custodial" and "maintenance" refer to employees whose duties are directed to the upkeep of the plant and who do no work on the commodities furnished the Government. Firemen engaged in producing heat and power for plant operation, telephone operators, janitors and watchmen usually would fall into this category and would be exempt from the Walsh-Healey Act although probably subject to the Fair Labor Standards Act.

Employers who are subject to any provision of either Act must keep certain time and payroll records according to Regulations issued by the Administrator. No special forms or bookkeeping methods are necessary, in fact, the required information is what any careful employer should know about his labor costs.

Though education and voluntary compliance have featured the administration of these two laws, both Acts have "teeth" in them. Penalty provisions of the Wage and Hour Law include for wilful violators fines up to \$10,000, and, in the case of a second offense, imprisonment up to six months, a fine or both. Disabilities that may result from failure to comply with the Walsh-Healey Act include cancellation of the contract, and, where flagrant violation is found, employers can be blacklisted from Federal contracts for a period of three years.

With so much talk of "high wages" it may seem that the relatively low minima established under these two Acts would have little practical application today. Yet the record of Wage-Hour inspections since Pearl Harbor shows that some 488,000 employees in more than 25,000 establishments had failed to receive minimum wages and overtime compensation in accordance

with the provisions of the Fair Labor Standards Act. As a result of this check - up restitution amounting to about \$22,000,000 has been agreed upon. This sum represents the difference between the amounts due employees under the Act and what they actually were paid.

No discussion of labor standards should overlook their effect on war production. Industrial progress is a matter of men and machines. Nowadays, there is pretty general agreement that improved labor standards point the way to improved production. Our industrial history proves that progress is swiftest where payrolls and profits keep step. The mounting number of ships, guns, planes, tanks and other war machines that we are rolling out is a further proof. Nor should we forget that decent labor standards help to remove one speculative element in business costs and place the competitive emphasis where it belongs,-on better production techniques and sound merchandising.

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Lignin Hand Cleansers

Lignin as it occurs in the plant differs from that obtained as a byproduct of industrial processes, called technical lignin. Technical lignins also differ from each other depending on whether they are obtained from the black liquor of the soda pulp process or from the sulfite waste liquor. A technically pure lignin is obtained in the wood saccharification process and can serve as a basic raw material. Lignin obtained in the Bergius-Rheinau process in which concentrated hydrochloric acid is used, is darker in color owing to its resin content and its partial humification, than that obtained in the Scholler-Tornesch process in which diluted acid is used under pressure. The latter is light in color, especially when in a dry state. The acid-free lignins from wood saccharification are useful as raw material for resin-containing foam-producing hand cleansers by addition of only 3 per cent of a potassium or sodium fatty-acid soap base. Refle. Chem. Ztg. 65, 264-7, 276-7; through Chem. Abs.

[†] These regulations and other publications concerning the Walsh-Healey Act and Fair Labor Standards Act are available without cost at all offices of the Wage and Hour and Public Contracts Divisions, including the National Office, Desk MSS, 165 West 46th Street, New York, N. Y.

RESEARCH...

its place in the modern soap plant

T a time such as the present when the privations of war economy are being felt most surely by all industry and particularly by soap manufacturers, large and small, the advantages of a well organized research department become most apparent. Those producers who are already equipped with comprehensive research and development facilities are the firms who have been best able to maintain production and quality despite war-time restrictions on the use of various oils, fats, perfumes, and other raw materials. The plants whose chemical staffs have been experimenting for years with substitutes for coconut oil, where fatty acids have been tested on pilot plant scale, where wetting agents and synthetic non-soap detergents have been thoroughly investigated, have been in much better position than many of their competitors to meet the changes that have been forced on the industry over recent months.

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Incidentally they will also be in the forefront of the industry when it comes to meeting the post-war surge of renewed progress. As a slight offset to the manifold evils of the current war, everyone recognizes that it has tremendously accelerated scientific progress. After the war, the discoveries which it has promoted will be devoted to the arts of peace.

At first glance, it may not appear that the soap industry will be materially affected by the developments of science and technology arising from the war, but a very little consideration will reveal important features of relationship. There is not the slightest doubt but that after the war we shall see greatly reduced prices for nickel, chrome-nickel steels and other corrosion-resistant metals and alloys. Soap industry research has al-

loy Alan Porter Lee

ready proven the value of such metals and alloys to the soapmaker for construction of equipment in which soaps and other products of greatly improved keeping qualities and resistance to rancidification can be produced. There can be little doubt that the soap plant of the future will be outfitted almost entirely with equipment constructed of such metals and alloys.

The war has given great impetus to the science of electronics. Electronic tubes are being employed for many tasks of control and inspection. In the packaging departments of progressive soap plants these useful little silent watchmen are already employed to some extent and will undoubtedly be given more duties as their many versatile aptitudes become more generally understood. The onward march of synthetic rubber will have its effects upon the soap industry. The butadiene process demands quantities of soap as an emulsifier in polymerization. In addition, the development of synthetic rubber, as that of aviation gasoline, has so stimulated petroleum industry development that during the post-war period we can expect to see synthetic fatty acids of high purity produced from petroleum at prices which will be competitive with those of natural fats. It would hardly be correct to attribute to the war the growing tendency toward development of high-temperature continuous soap manufacturing processes, except possibly insomuch as war appears to be a general stimulus to invention. All soapmakers must, however, give serious thought to the progress of such processes, which bid fair to reduce materially the cost of soap manufacture and that of glycerine recovery. The feature of elimination of glycerine concentration of itself makes these improved procedures most attractive.

ESEARCH in a modern soap N plant, to be effective, must be organized to embrace the joint efforts of scientists skilled in a number of highly specialized branches of science, some of which seem but distantly related to the manufacture of soap. In presenting below a brief outline of the organization of a suitable research and development department for a soap manufacturing business, it is assumed that, like most of those in the field, the business includes the manufacture of toilet and laundry soaps, liquid soaps, soap powders, shampoos, toilet preparations, etc.

Research will naturally fall into several groups, first, investigation from a pure research standpoint of the nature of detergency and the behavior of various substances when employed as detergents, under varying conditions. This is a task to be pursued by physicists, physical chemists and colloid chemists. This group in the course of their studies will conveniently include investigation of the physical nature and composition of soap at all stages of its manufacture and use along lines so brilliantly pioneered by McBain and MacLennan.

The second classification will cover the effect upon the human skin of various soaps, cosmetics, perfumes and their individual ingredients. This work will be performed by dermatologists and physiological chemists, and will include the testing of proposed

new ingredients in soap formulae, as well as of those in general use. Intensive study of the epidermal and dermal functions, disorders and renewal cycles will be an inevitable part of the work under this classification, which work is of sufficient value to justify the research endeavors of skin specialists with medical training.

A third field of pure research offers attractive vistas, namely, the intensive botanical study of sources of oleaginous raw materials, natural perfumes, fixatives, coloring materials and other auxiliaries to the production of soaps. A thorough survey of nature's riches throughout the world, with compilation of a catalog of the substances useful to the soapmaker and perfumer, and of the properties of those substances, will without doubt provide one instance in which "pure" research will quickly yield handsome profits to its underwriters. Hand in hand with this study of natural products, a similar testing and classification of the many and varied synthetics in the perfume, fixative, color and allied fields will be a natural concomitant.

The application of perfumes, colors, and fixatives to the soaps themselves and of all these together with various vitamin products to creams and other cosmetics will occupy the efforts of another division of research workers.

The scope of the research department properly includes testing the various products of the factory for their quality characteristics under many and varied conditions. This province of a research department should not be viewed as an infringement of the duties of the control division, which tests samples of the finished products to insure uniformity of quality. While this function of the control laboratories continues unimpaired, the research department will be strongly interested in establishing limits of quality and performance characteristics of the various products. Such investigations will include study of the induction period of rancidification under varying conditions, of rate of moisture loss in storage and in use, of degree of detergent or cleansing performance with varying types of water



and other solvents, of maintenance of form of soaps during useful wear, and of many other product characteristics which will shed light upon quality and quality maintenance.

As a natural sequence to such quality research, further studies will be conducted directed toward improvement of quality and betterment of its maintenance coefficients. These investigations will embrace experimental formula changes, involving changes in basic fat formulae as well as study of the effects of small percentage ingredients such as inhibitors, perfumes, fixatives and the like. In a modern soap manufacturing business, this branch of the research department dealing with quality maintenance and improvement will need have no idle moments.

In manufacturing research, as distinguished from pure research, the manufacture of soap and allied products presents a field almost limitless in scope. In organizing a division of the research department for conduct of such manufacturing research, it

seems wise to consider development, or translation of research laboratory results through pilot plant to commercial operation. The development functions are most naturally performed by a division of the research department, at least as far as through pilot plant operations.

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Manufacturing research will conveniently include two branches, first, that devoted to improvement of processes currently in production use, and second, a branch concerned with the initiation and perfection of new products and processes. It is in this division of manufacturing research that the talents of chemical engineers and mechanical engineers can be employed to best advantage. Where the work is concerned with improvement of present processes, its course will include thorough study of those processes in the plant itself, analysis of results to determine actual existing process efficiency at each step, and establishment of points and degree of improvement susceptibility. It may often be necessary to reduce the commercial process to pilot plant or laboratory

scale operation for effective study. Once the need and possibility of process improvement are so established, the study procedure will be reversed and various means of accomplishing the desired improvement will be tested first in the laboratory, then in pilot plant apparatus.

In their attitude toward new product development, many soapmakers have in past years adopted as their platform the old cliche-"There is nothing new under the sun," and have been content to go ahead producing "Laundry soap, toilet soap, chips and powder" year in and year out. Possibly all soapmakers might still be doing this but for the external pressure which has been exerted upon them during recent years by the wide expansion of chemical engineering education in general and by the rapid progress of process development through research in other industries.

Conspicuous examples of developments brought into the soap in-

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dustry from outside are to be found in the sulfated fatty alcohol products which are the bases for new non-soap detergent products for which superior emulsion properties are claimed, and in the synthetic fatty acids produced in petroleum refineries. While the latter products have had only moderate acceptance to date in soap manufacture, it would seem futile to attempt to deny that in the reasonably near future they will be available in quantities, of good quality, at economical cost.

The possibilities of research in organic synthesis in the soap industry are limitless. One of the country's large producers has been a pioneer along these lines and through research on the derivatives of fatty acids has opened many important new fields of consumption for these products.

Hand in hand with research on aliphatic organic synthesis, the soapmaker will see progress in the synthetic aromatic field with new perfumes, fixatives and colors, most of which have in the past entered the soap industry from without, but which can be developed as a proper part of the soap factory research.

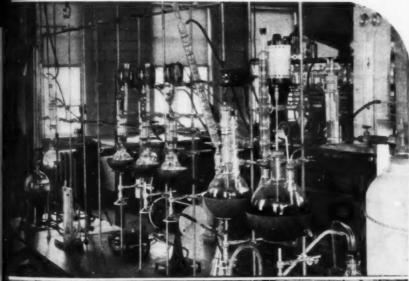
The technology of new soapmaking processes, including particularly the continuous saponification, hydrolysis and distillation processes will be studied in the laboratory, developed in pilot plant and applied in commercial production.

The engineering design division of the research department, staffed with chemical engineers, mechanical engineers and metallurgists, will produce suitable pilot plant equipment for process development within the department, will study the effects of metals upon processes and products and will initiate and develop new production equipment when required.

A complete integrated program for research in connection with soap manufacture will thus occupy a staff comprising doctors, dermatologists, physiological chemists, physical chemists, chemists trained in organic synthesis, in analysis, in natural and synthetic perfumery, in colloid chemistry and in metallurgy, chemical engineers and mechanical engineers. Technical and patent library service and general secretarial, clerical, drafting and laboratory assistance are obvious adjunctive requirements.

Such a staff, equipped with ample laboratories, pilot plant and engineering design equipment, machine shop and library facilities, will produce handsome dividends for the soapmaker on his investment in research.

A toilet soap, which it was said can be used satisfactorily in salt water or water of zero hardness, has been developed for the armed forces by soap makers and chemists of the Army Quartermaster Corps. An all-purpose soap, it can be used in the widely varying waters wherever troops are stationed for bathing, shaving or laundering. Procter & Gamble, Lever Bros., Armour Soap Company, Colgate-Palmolive-Peet, E. I. du Pont de Nemours & Co., and Allied Chemical & Dye Corp. participated in the development of this new soap.





The Case for

ABRASIVE HAND SOAPS

ET the doctors and the dermatologists think what they may of the use of abrasives in hand soaps, it is apparent that hand soap manufacturers and users alike still consider a proper abrasive absolutely essential in the formula of an efficient mechanic's hand soap. We gather this from a series of readers' comments inspired by an article on hand soaps in our February issue, in which Dr. Louis Schwartz, Medical Director of the U. S. Public Health Service, was quoted as saying "The best cleanser is a mild toilet soap . . . use of abrasive soaps should be discouraged."

Hand soap users in particular are inclined to disagree with what they consider to be overly conservative medical opinion on this point, to judge from comment we have received. Says one plant manager, "I have to think of the 999 workers out of 1,000 who have a hand cleaning problem. The doctors focus all their attention on the one possible hypersensitive user who might develop a skin condition."

Another plant operator commented in an equally strong vein on the importance of giving workers a soap that can be counted on really to take the grease and imbedded grime off their dirty hands. He recalled that on one occasion his firm had shifted from a grit soap to an ordinary cake toilet soap lacking any abrasive ingredient. A few weeks later the fire control brigade was somewhat mystified to find a gradual disappearance of sand from the sand pails provided to fight oil fires. The answer turned out to be that the workers had found the new soap incapable of coping with their particular hand washing problem, and they were supplying their own abrasive,-direct from the sand pails.

Where hands are badly soiled, it seems evident that something more than the ordinary type toilet soap is

required. Resort must be made either to the mechanical action of some abrasive or the solvent action of some added ingredient in the soap or used separately to supplement the normal detergent action of plain soap. It would seem to be evident, too, that if the proper type of abrasive is selected, there need be no particular fear of unfavorable reaction on normal

S. E. Gibbs of Gibbs Battery Co., Corydon, Iowa, writes to advise us that he has never heard of a case of dermatitis among workmen using an abrasive hand cleaner made by his firm. He points out that pumice of the proper grade is too soft to cut the human skin, and hazards the opinion, which he admits is not backed up by any particular laboratory data, that pumice is sufficiently abrasive to remove dead skin, but not harsh enough to cut or hurt live skin. We quote briefly from his letter on this debated point.

"The writer often demonstrates the fact that pumice will not cut human skin by placing a small quantity of pumice on the back of the hand and rubbing it with the thumb of the other hand until the pumice is completely pulverized. Certainly if pumice would damage the skin, the repetition of this stunt eight or ten times a day, month in and month out, for a period of ten years would have almost ruined my left hand. Although this demonstration is always put on in one spot, I will defy anybody to look at my hand and tell the spot where the pumice is usually pulverized.

"Strong alkalies or any cleaner which takes too much of the natural oil out of the skin might have a tendency to dry the hands. This would be especially aggravating on one whose hands were already in a dry condition due to exposure to solvents, or on hands which were naturally very dry. Very mild cleaners and pumice do an excellent job of cleaning but do not increase the dryness of the skin."

On this subject of possible dermatitis danger from use of abrasive soaps, the answer probably is that much depends on the type abrasive we are talking about. Hard particles of sand, no doubt, are dangerous under continued use, but soft particles of pumice or similar type of mild porous abrasives such as corn-meal, sawdust, etc., would not encounter the same objection. However, these non-mineral mild abrasives often lack uniformity and the effectiveness of pumice. Comparative hardness of the abrasive ingredient may well be the key to the picture. Materials above a certain hardness are evidently unsafe for hand soap use, while those of softer characteristics will not injure the average human skin. Just what the upper and lower limits are has apparently not yet been determined by scientific investigation-not even by the doctors who are so quick to condemn "abrasive" soaps. This would seem to offer a very interesting subject for future tests, and it should be kept in mind by possible investigators that there are even wide variations in the hardness of different types of pumice from different sources.

Further observations on the subject of abrasive soaps are offered by Clarence Clark of Whittaker, Clark & Daniels, Inc., New York, suppliers of pumice used in the manufacture of hand soaps. Mr. Clark says in part: "While we admit that there may be on the market soaps which use coarse abrasives, and which may be harmful to the skin, we know that pumice of the fineness generally furnished to the soap industry for hand soap, is considerably less harmful than the strong alkali used in many soaps that

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"The reason why pumice is used in certain types of soaps, is of course for its abrasiveness. In using a hand soap, whether in cake or powdered form, the pumice only rubs across the surface of the skin which helps to dislodge the dirt. The alkalis or wetting agents that are used must act entirely different, in that they have a tendency to absorb into one's pores, which naturally helps to dislodge the dirt.

"Where wetting agents are used, however, they act necessarily to emulsify and remove too completely the natural skin oils, which is not always desirable. It will be remembered that when soapless shampoos were first put on the market they were made up entirely of synthetic detergents, and were found to be so drying to the scalp that they had to be reduced considerably in strength before they were accepted by the public.

"I, personally, have used a certain brand of pumice soap for some time, as have my children, and I have yet to notice any dryness, fissuring or thickening of the skin. As an after thought, it is worth noting that pumice is used to some extent in certain types of facial creams. A material that is soft and fine enough for such an application, would, we should think, be safe enough for use in a mechanics' hand soap."

Comments by W. A. Burns, Jr., vice-president of James H. Rhodes & Co., Chicago, stated in part: "For many years we have been suppliers to industrial soap producers of volcanic ash, Italian, and now domestic pumice. Through the producers and through experiences of our own with these materials, we believe them to be non-irritating and believe that due to particle shape and structure, the individual

particles break down under pressure rather than scratch. There are some abrasives used in soap such as fine mesh silicas which work quite differently.

"We inquire, therefore, if Dr. Schwartz in his article appearing in the August issue of Industrial Medicine made any distinction between materials when he wrote, quoting from your quotation, 'The use of abrasive soaps and cheap bulk soaps should be discouraged.' We would appreciate your clearing up this classification of abrasive soaps and again point out that we believe the use of certain abrasive materials is non-injurious."

BEHIND the low reputation which the rank and file of abrasive hand soaps have had with the medical profession over a period of years stands the innumerable low grade products which have been on the market, many of them of short life, but all of them designed to be made as cheaply as the law allows. For years, a rather large amount of paste hand soap has been

sold direct to individual workers in factories all over the country by itinerant peddlers traveling from plant to plant. Their main stipulation in buying their supplies from manufacturers was that the product had to be cheap. It also had to be strong and harsh,—a rough and ready product which would literally cut off the grime and a good layer of skin with it.

The stipulation of cheapness,these products were retailed by peddlers at seldom more than a dime or three cans for a quarter, and sometimes a nickle,-entailed the use of the lowest cost materials. Soap content was not too high and was usually a jell made from the lowest price chips which could be purchased. Addition of silicate was frequently excessive, and the abrasive was ordinary beach sand where it was obtainable or a cheap grade of silica or feldspar or any other low-cost material. Manufacturers who did not make products to meet this price market, simply did not get any of the business.

(Turn to Page 61)



Heard in Washington.

By Jay A. Bonwit

URTHER restrictions on the soap industry's use of oils and fats are in the offing. In order to make more soap from less fat, the fatty content of soap products may be reduced from present levels by Government edict and the substitution of varying percentages of rosin, alkali builders and inert fillers become mandatory, according to well-informed Washington opinion. Reports indicate that the choice of extenders will be left to the discretion of the soap manufacturer, but that the percentages will be designated,-5 per cent for chips and flakes, 10 per cent for powders and granulated products, 2 per cent for toilet soaps. Yellow laundry soap will carry a minimum of 40 per cent rosin if the plan under consideration becomes effective. Makers of white toilet soaps do not like the idea, while producers of soap powders and granules say rosin is not suitable.

The proposal to force the use of more non-fat ingredients in soap products was discussed at a meeting of the Soap and Glycerine Advisory Committee in Washington on Feb. 17 and finds both support and opposition among soap manufacturers. The plan is receiving serious consideration by the Soap and Glycerine Section of the Food Distribution Administration of the Department of Agriculture. (Soap and Glycerine Section was transferred from WPB to Department of Agriculture last month.) The object is to increase total supply of soap products between 150,000,000 and 250,000,000 pounds in 1943 and offset in part the shortage of soap kettle fats and oils.

Strong efforts are being made by the Soap and Glycerine Unit, says an-

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other report, to augment the short supply of domestic oils and fats by increasing imports from South America, particularly the Argentine, of tallow and greases by about 100,000,000 pounds if possible. Attempts to obtain the assignment of bottoms to bring in the added fat supplies are now being made in Washington. The idea of using a small percentage of linseed oil further to augment soap fat supplies this year is still under active consideration. With these larger fat supplies, no further reduction below the present 84 per cent level of soap operations would be necessary. To maintain soap output at this figure is stated to be chief aim of the Soap and Glycerine Unit at the present time.

N estimating minimum civilian requirements for many products in case the war is prolonged for several more years, the Office of Civilian Supply of WPB places the figure for soap and cleansers at 67 per cent of the 1939 consumption figure which is about 15 pounds per capita. This figure probably does not mean too much in the light of necessary vital glycerine production and is one of a long list of minimum estimated needs below which the civilian population could not go in case of "a long war." If glycerine production is to be maintained at needed levels, any such figure for soap would probably be more theoretical than real. This latter point is evidently recognized by the OCD in its report which stated in part as follows:

"Under the British ration system, the annual consumer consumption will average about 13 pounds per capita; this is about as low as the British think that they can go. On this basis, we are suggesting a basic per capita figure for bedrock civilian consumption of 15 pounds. On the basis of a population of 127,000,000 persons, this would indicate a total consumption of 1,905,000 pounds. This represents 67 per cent of the estimated consumption of 1939. In this connection, it should be pointed out that these estimates are for the requirements for soap by the ultimate consumers at retail level. Actually, the production of soap is inseparably connected with the production of glycerine, and the requirements for glycerine are most likely to control the industry."

STATUS of the soap industry as an essential part of the nation's war effort was still further emphasized during recent actions affecting both materials and manpower. With labor fast becoming the No. 1 problem, it is apparent that the so-called non-essential civilian industries will gradually be squeezed out of the picture through loss in manpower, and restrictions on transportation, regardless of whether the industry consumes critical materials.

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Keeping these factors in mind, it is well to review what is likely to be the position of soapers. Key to this position is still the continuing heavy war requirement for glycerine. The Office of War Information during the month stated that "the soap industry is at present accounting for about nine out of every 10 pounds of glycerine being produced." Nothing being considered that would tend to change these conditions, nor is there any possibility that the war requirements will lessen.

To the contrary, the needs for glycerine will increase.

Therefore, all efforts are directed toward increasing the recovery of glycerine, and renewing the drive for the recovery of waste kitchen fats in the homes. It is significant that the Government admits that the waste kitchen fat recovery program has to date been inadequate. The essential demands for glycerine have been met only by drawing on stockpiles. The War Production Board in an official statement admits that the inadequacy of the campaign to salvage kitchen fats was due to the fact that the collection system was not thoroughly organized,with the indication that the apathy of the housewife was an outgrowth of the poor preparation of the campaign.

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Operating on this theory, the WPB is intensifying the collection campaign,-with a new \$400,000 industry appropriation aiding the drive,-making certain that adequate steps are taken for the convenient participation of the average housewife. The backbone of the renewed campaign will be the use of glycerine in the war, tying in the housewife's effort in the collecting with the war front. The new emphasis on salvage of kitchen fats will be coupled with the efforts to increase imports of tropical oils with further conservation measures on the part of soap manufacturers to increase their recovery of glycerine.

New glycerine recovery requirements established by the Department of Agriculture will be more severe than those set up under M-193. Stringency of these requirements will be dictated by the supply position. If the campaigns as planned produce sufficient fats to meet the needs for glycerine, restrictions will tend to ease off, with controls to be relatively lenient. If, on the other hand, the new campaign to increase recovery of waste fat fails, regulations governing soap making will be further tightened.

IN addition to the problem of raw material supply, the two paramount problems of the soap industry are manpower and transportation, and striking developments in each of these phases have been evident. Here again it is taken for granted that soap making is essential to the economy, and the only questions which arise are those of how the industry should integrate its practices to those which will have to be observed both by civilian and war industry alike to insure a full utilization of the nation's resources.

In the field of transportation, the soap industry has already released a percentage of tank cars and box cars used in normal transport. This release has been made possible by increased loading of cars, faster unloading and dispatching, and by substitution of motor and water transport where possible. Arrangements are under discussion to eliminate cross-hauling of soap raw materials and crude glycerine.

One of the measures under consideration is the manufacture of soap products required by the military services in plants located close to points of consumption. This might be considered a forerunner of a general plan to allocate production and markets by area. This control over markets would be largely on bulk soaps and cleansers, with the Government control agencies indicating that the war economy has not reached a stage where investments in brand names must be sacrificed.

On the problem of manpower, it has become apparent that a shortage crisis is fast developing, and all indications point to further withdrawals of men from industry. Policy of Selective Service and the War Manpower Commission is that industry should seek deferment of any worker whose job is essential in an essential industry. At the same time, it is the policy to channel all men who can be replaced and are physically fit into the service.

Under all circumstances it is stressed on industry by Government agencies that worker deferments are to be considered to be effective for only a six-month period. It is indicated that such deferments will be extended for a longer period when such action can be supported as a necessity in a vital industry. At the same time, it is pointed out that some of the most technical military assignments require a relatively short training period.

However, it is clear that the soap industry will be given every consideration in maintaining its required labor strength. At the same time, the facts are that all industry can expect to lose workers in the skilled groups, and must formulate plans so as to release manpower without materially reducing the required rate of production. Replacement schedules prepared in conjunction with manning tables, and a close consideration of the hiring aids offered by Government agencies, such as the United States Employment Service in hiring, and the various training aids offered by the War Manpower Commission, are recommended. One fact is certain, and that is that both the soap industry and the makers of disinfectants and insecticides will be given every assistance in obtaining repair, maintenance and operating supplies.

THE controls over materials still have not been crystallized to a degree of finality. At the same time, policy insofar as the chemicals industry has been expressly stated. This policy is to provide such materials as are needed to keep the industry going at the required rate of output. The policy as to control over chemicals will be largely dictated by the importance to the national economy of the end uses to which the chemicals are put. A detailed description of the procedure in connection with the allocation of chemicals as announced by WPB, follows:

"Suppliers and distributors of products manufactured from allocated chemicals have on many occasions brought to the attention of the Chemicals Division the difficulty which they face in obtaining end use information from their customers. It is the policy of the Chemicals Division to distribute critical chemicals by specific allocation rather than by preference ratings and for this reason it is essential for suppliers of these chemicals to transmit to the Division accurate information concerning the end use to which their products are to be put. Clearly, suppliers of allocated chemicals can obtain this information only from their cus-

(Turn to Page 65)



New Products

Hearts of soap—Schiaparelli's gift package of Shocking soap—features three guest cakes surrounding a bath size cake. Four cakes in the beart shaped gift hox retail for \$2.

From South America comes the inspiration for "tuya," which means "for thee alone." A new soap in a new package, "tuya" is one member of a new line of cosmetics developed by Para Ti Corp., New York. Three cakes retail for \$1.





Britex Co., Brookline, Mass., bas just brought out "Britex," an allpurpose surface cleaner for washing walls, cleaning paint, etc. A small amount of the compound is dissolved in warm water, applied with a soft cloth, and then rinsed.

and Packages

Chang & Polishon Duco, Dalax and Synthesic Engage POLIS AND CLEA New and improved is Clifton Chemical Co.'s package for their "Deodorette" cakes. The new packaging permits the immediate delivery of any of the 12 cakes in the package. 12 containers are packed in a carton to make the a one-gross container. up a one-gross container.

POLISH



Latest in an ever-lengthening list of examples of the exigencies of war in packaging is Du Pont's shift from metal to glass for their automobile polishes, waxes and cleaners. The bottles are Armstrong's traditional Boston Round. The cap is plastic.

OUPONT CLEANER

In new wartime garb, the one pound jar of Johnson's Paste Wax, pictured alongside its predecessor — the metal can, makes its debut in Anchor Hocking Glass wide mouth amber container.



SOAP

ANIMAL OILS, FATS, CHEMICALS, VEGETABLE OILS

DRUMS - TANK CARS - TANK WAGONS

Every raw material necessary for the manufacture of soap and allied products is carried in stock and is available at the right price for immediate delivery to your door.

PALMITIC ACID

90-95% Pure White, High Melting Point

ALCOHOL BLEACHING POWDER BICARBONATE OF SODA CARBON TETRACHLORIDE
CALCIUM CHLORIDE
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CAUSTIC POTASH DYES DISODIUM PHOSPHATE GLAUBER'S SALTS GLYCERINE METASILICATE OXALIC ACID POTASSIUM CARBONATE SAL AMMONIAC SALT SAL SODA SILICATE OF SODA

SODA ASH TRISODIUM PHOSPHATE Telephone: MOrsemere 6-4870. Direct New York Tel.: CHickering 4-7533. Members New York Produce Exchange.

GLISYN

Inquiries solicited on this low price glycerine replacement.

CASTOR OIL
COCOANUT OIL
CORN OIL

LARD OIL

COTTONSEED OIL

NEATSFOOT OIL

RAPESEED OIL

WHITE OLEINE

STEARINE STEARIC ACID

GREASE

TALLOW

SALAD OIL SOYA BEAN OIL SESAME OIL TEASEED OIL

ROSIN

NEATSFOOT OIL
OLEIC ACID - RED OIL
OLIVE OIL
OLIVE OIL FOOTS
PALM OIL
PALM KERNEL OIL
PEANUT OIL
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TALLOW



EASTERN INDUSTRIES, INC.

RIDGEFIELD, N. J.

NEWS

Release Frozen Coconut Stocks

Approximately 20,000,000 pounds of coconut oil are being released for soap making uses by the action of the WPB in "unfreezing" stocks of high lauric acid oils originally frozen by order M-60-a. Stocks set aside under the original "freeze" order, M-60, have not been released, it should be noted. Holders of "frozen" oils are being notified individually by the WPB as to the release of these reserves, and no company has a right to use its oil until so advised. Companies that did not notify WPB how much high lauric acid oil they set aside under the second "freeze" order must do so before the WPB will release such stocks.

Charges Coconut Oil Leak

The charge that advance warnings of proposed coconut oil "freeze" orders were received by a number of large soap companies was levied last month in Washington in a statement by Herbert Jamul, president of Chemical Products Co., Miami, before the House Committee on Small Business. Jamul, who charged various government agencies with "passing the buck" in giving him a decision on his proposal to produce coconut oil from Florida coconuts, was also quoted as saying that the major soap companies had avoided the effect of WPB orders freezing coconut oil through tip-offs from their own representatives serving as "dollar-a-year men" with WPB.

John Toohy Joins OPA

John Toohy, manager of distribution of E. R. Squibb & Sons, Brooklyn, and former chairman of the Drug, Chemical and Allied Trades Section of the New York Board of Trade, has just been named to serve as assistant to the new department head

of the Chemical Branch of OPA. Mr. Toohy will make his headquarters in Washington and will have direct juris-



JOHN TOOHY

diction over soaps, glycerine, waxes, fine chemicals, drugs and cosmetics.

Soap Priority Change

Soap and glycerine producers requiring priority assistance to secure repair, maintenance or operating supplies will obtain such assistance, starting April 1, under Controlled Materials Plan Regulation No. 5 and not under P-89 or P-100 as heretofore. Soap and glycerine producers are entitled to AA-1 ratings, except that aluminum, copper and steel are specially handled.

Offer New Cleaner

National Laboratories, Toledo, O., has announced a new all-purpose cleaner which, it is claimed, "reduces the need for rubbing and scrubbing." It is described as a concentrated compound containing no abrasives. Packaging is in 55-gallon returnable steel drums. A special promotional campaign is under way in the institutional field.

Renew Fat Salvage Drive

The new \$400,000 Waste Fat Salvage Campaign, sponsored by the Association of American Soap & Glycerine Producers in cooperation with the War Production Board Salvage Division was expected to get under way March 1. This second and more intensive drive follows an initial six weeks campaign conducted early last Fall. It has recently been announced by Paul Cabot, director of the WPB Salvage Division, that fat collections in December reached a record level of 5,000,000 pounds. It is hoped to boost the monthly collection total substantially as a result of the renewed advertising drive.

P & G Found Not Guilty

A directed verdict of acquittal was ordered by the court in the action against Procter & Gamble Co. decided last month in a Federal district court in Boston. The charges brought by Lever Bros. Co. alleged conspiracy to obtain secret patent information. While the Procter & Gamble Company itself was acquitted, directed verdicts of guilty were returned against four P. & G. employees who pleaded guilty. In ordering the not-guilty verdict in the case of the company, Judge Sweeney observed that "There were probably breaches of business ethics in this case, but I am not at all satisfied that any of the officers or board of directors knew of any conspiracy or attempt to use the mails to defraud."

Army Soap Plant

The Canadian Army is building at the Barriefield military camp, Kingston, Ontario, a soap plant to utilize waste fats. At present, a ton of soap is being made each month from the fats extracted from the waste of 10,000 meals a day.

Isobornyl Acetate (Synthetic Pine Needle)

SERVES EQUALLY WELL IN WAR AND PEACE FOR SOAPS, DISINFECTANTS AND OTHER SANITARY PRODUCTS

This highly valuable synthetic is doing valiant service in many formulations in wartime—as it has in peacetime. Its extreme stability and uniformity of odor make it the preferred base for imparting a fresh, pleasant pine needle scent to soaps, disinfectants, deodorants, theatre sprays, para blocks and other sanitary products.

Du Pont Isobornyl Acetate is water-white, resistant to alkali and non-discoloring. The low price and dependable quality make it the economical base for your use.

For testing samples and price, write to E. I. du Pont de Nemours & Co. (Inc.), Aromatics Section, 40 Worth Street, New York, N. Y.



Wilson To Quit Soap Unit

E. W. Wilson of Armour & Co., Chicago, for the past six months chief of the Soap and Glycerine Unit of the Fats & Oils Branch of the Food



E. W. WILSON

Distribution Administration, Department of Agriculture,—the unit was formerly a section of the Chemicals Branch of WPB,—and prior to that cochief of the unit, has resigned effective March 15 and will return to active duty with Armour & Co. at Chicago.

He will, however, continue to give several days a month to regular consulting with the Soap and Glycerine Unit.

Dr. C. W. Lenth formerly of the Miner Laboratories, Chicago, where



C. W. LENTH

for nine years he had charge of the extensive glycerine research program for the Glycerine Producers Association, and who has been assistant chief of the Soap and Glycerine Unit for the past six months, will become acting chief effective March 15.

Liberalize Container Order

Another amendment to Conservation Order M-81 allows can manufacturers to use "frozen" tinplate and blackplate for producing ends for fiber bodied containers for toilet bowl cleaners, ointment and salve boxes and paste soap. Toilet bowl cleaners, according to the latest version of M-81, are "limited to cleaners containing not less than 70 per cent bisulphate of soda." They may be packed until June 30, 1943 in a 10-ounce can size with body and ends of blackplate, and 50 per cent of the 1942 pack. A liberalization in the case of shoe polish, leather dressing and saddle soap was made under the newly amended form of the order. Now, shoe polish, etc., are allowed 50 per cent of their 1942 pack, in any can size and from frozen blackplate and blackplate rejects. Paste soap can be packed in frozen blackplate and blackplate rejects, instead of the plain

"blackplate" of the previous form of the order.

Oil Chemists Meet May 12-14

The 34th Annual Meeting of the American Oil Chemists Society will be held in New Orleans, La., May 12 to 14, inclusive. The Roosevelt Hotel will be the official headquarters and meeting place. Dr. K. S. Markley is the general chairman of this year's convention. The program will include papers on chemical, analytical, technological, industrial and economic phases of the production of fats and oils. A golf tournament is scheduled for Thursday afternoon, May 13, at the New Orleans Country Club. The dinner-dance will be held the following evening at the Roosevelt Hotel. Because of the difficulties inherent in staging a convention under war-time conditions, those planning to attend have been asked to send their reservations in early.

Soap Sales Hit Peak in '42

Climaxed by the largest fourth quarter since 1935, when records first began to be kept, soap sales for the entire year of 1942 were the highest in the eight-year period, 1935-1943. The figures, reported in the quarterly Sales Census of the Soap Association, represent the output of 75 soap manufacturers who are believed to account for nearly 90 per cent of all the soap made in the United States. Soap sales for 1942 totalled \$364,222,483 compared to \$326,133,270 for the best previous year's total of 1941. The poundage total, 2,938,529,805, while still very high, fell short of the record output of 1941 by some six per cent. The 1942 volume of other-than-liquid soap was 10.7 per cent more than that of 1940.

Following a 70 million dollar fourth quarter in 1941, total sales in the first three months of 1942 soared to the unprecedented high of \$107,-389,936. The highest previous quarter was the second quarter of 1941, when a sales figure of 90 million dollars was reached. The 107 million dollar first quarter of 1942 rose far above a respectable 79 million dollar first quarter in 1941. As was expected, sales in the second quarter of 1942 fell sharply to a figure of \$76,304,412. The second quarter of 1941 was \$90,624,470. From 76 millions in the second three-month period, sales in the third quarter of 1942 again rose sharply, reaching a figure of \$94,672,287. The same period in 1941 was figured at \$85,915,178 as against 66 million dollars in 1940. The fourth quarter of 1942 produced sales totalling \$85,855,848. The final quarters of 1940 and 1941 were \$59,064,-959 and \$58,481,653 respectively.

News of Shulton Men

I. Paul Cole, sales representative for Shulton, Inc., New York, who has been covering the South, was inducted into the U. S. Army recently, and is now at Technical School, Kessler Field, Miss. Harry E. Smith, Belmont, Mass., recently joined Shulton's sales force to cover New England and upper New York state as assistant to Raymond M. Vorce.

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ESSENTIAL OILS

Almonds Amber Bois de Rose Camphor Cananga Cassia Cedarleaf Cedarwood Citronella Cloves Eucalyptus Lavender Spike Lemongrass Petitgrain Pine Needles Rose

Rosemary Safrol Sage Spanish Sandalwood

Sandalwood Sassafras Thyme

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Soaps
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Liquid Soaps
Deodorant Blocks
Theatre Sprays
Floor Wax

Polishes Disinfectants Insecticide Sprays

Toilet Preparations

AROMATIC CHEMICALS

SPIKE LAVENDER ROSEMARY

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Of special interest at this time are our spot stocks of Spanish Rosemary and Spike Lavender. We are direct importers and are in position to offer oils of pleasing quality. May we submit samples of these oils as well as any others in which you are interested?

We are now able to offer fine quality Imitation Oil of Cassia in large quantities and welcome your inquiries. Please write for sample.

In addition to offering a complete line of essential oils and aromatic chemicals we are headquarters for all types of perfume bases. Some of the products being perfumed by our laboratories are listed at the left. What perfuming problem do you have on which we may be of assistance?

STANDARD SYNTHETICS, INC.

119 WEST 25TH ST., NEW YORK, N. Y.

Ex-Soaper in War News

Corporal Edward A. Pfeiffer, former employee of the Procter & Gamble Co., at their Chicago plant, figured in the news from the Solomon Islands last month. Appealing to the quartermaster for a new shelter tent, Pfeiffer submitted his old one to support his claim. It was perforated with holes caused, he explained when a Jap shell landed nine feet away. And where had Corp. Pfeiffer been? Well, when the cannons opened up, he had rolled into a shallow, water-filled slit trench which he had had the foresight to make ready before retiring. He got a new tent but, as the news dispatch said, "he still swears by the same old foxhole."

Warn on Wasteful Shipping

Cross hauling and circuitous routing of freight will have to be stopped by voluntary action of shippers or the government is going to step in and do it for them, a spokesman for the Office of Defense Transportation told members of the Midwest Shippers Advisory Board at their January meeting in Chicago. "Get together," "and make an allocation of your distribution areas for the duration of the war. You can, in that way, reduce your transportation requirements 25 per cent and not lose a dollar's worth of business by so doing." Asked if his suggestion that trade territory be allocated might not be illegal, Keiser responded: "I think so; but if you get together, we'll stand between you all." R. F. Smith, district traffic manager of the Lever Bros. Company plant at Hammond, Ind., was the sole representative of the soap industry present, according to registration lists.

Discuss Cosmetic Price Order

Representatives of the Cosmetic and Toilet Goods Industry met with OPA officials in New York early last month to discuss a proposed new price regulation on packaged cosmetics. The new regulation is to replace the General Maximum Price Regulation for manufacturers, distributors and retailers of cosmetics and toilet preparations. The meeting was held to allow industry rep-

resentatives to discuss the terms of the proposed regulation and to offer suggestions.

Swift Head on Hospital Board

John Holmes, president of Swift & Co., Chicago, was elected president of the Board of Trustees of Wesley Memorial Hospital in that city, at the annual meeting, January 30.

Malin Resigns OPA Post

Patrick M. Malin, chief of the Chemicals Branch of the OPA, has just resigned and after March 15 will take up new duties with the Office of Foreign Relief and Rehabilitation Operations. Mr. Malin, who has occupied this post for only a little over three months, is to be succeeded by Joseph D. Coppock, his chief assistant. Mr. Malin was one of the speakers at the recent special conference of the soap industry in Washington.

Reprinted by permission from Feb. 1 issue of Tide.

Wrisley Aids Employee Education

The Allen B. Wrisley Co., Chicago, is sponsoring a cooperative arrangement which enables employees who so desire it, to complete educational courses at various colleges and technical schools. Under the plan, those participating work at the plant for a certain period of time and then attend school for an equal period. Ten employees at present are pursuing courses at the Illinois Institute of Technology, while others are enrolled at Northwestern Technological Institute, the Chicago School of Design, all in Chicago, and at Eureka College, a downstate institution.

Coconut-Sulfate Detergent

Novel fatty-acid derivatives are obtained by the reaction of tetrahydro-furfuryl alcohol with coconut fatty acids and with concentrated sulfuric acid. K. L. Russell, to Colgate-Palmolive-Peet Co. Canadian Patent No. 410,222.



MASK IT WITH THESE LOW COST, HIGHLY EFFICIENT DEODORANTS

Time-proven, easy to use, unfailing in results . . . these are some of the advantages of using the following economical F.B. deodorant specialties to combat the objectionable odor of your fly spray, insecticide or other technical products.

NEUTROLEUM is a general purpose deodorant which completely and permanently deodorizes a great variety of technical mixtures,—including insecticides based upon petroleum distillates,—at very low cost. Available in two types—NEUTROLEUM ALPHA for use when no additional aromatics are employed, and NEUTROLEUM GAMMA for neutralizing odors without imparting a perceptible aromatic character.

THANITE DEODORANTS No. 14153, No. 14154 and No. 14155 are very effective in counteracting the unpleasant odor of Thanite. The first two impart a pleasant scent to the spray, and at the same time neutralize the odor. No. 14155 neutralizes the odorous Thanite but does not impart a definite perfume note. Rate of use: 1/10 of 1% per unit quantity of finished spray.

DEODORANT No. 13454 is more economical than the foregoing, producing practically a neutral spray with even less than the proportions indicated above.

DEODORANT P-36 is for sprays based upon Lethane 384 Special. From 1 to 11/4 ounces per gallon of undiluted Lethane will produce excellent results.

Address us on your letterhead for samples and further particulars.

FRITZSCHE BROTHERS, Inc.

PORT AUTHORITY COMMERCE BLDG., 76 NINTH AVENUE, NEW YORK, N. Y.

BOSTON CHICAGO LOS ANGELES ST. LOUIS TORONTO, CANADA MEXICO, D. F.



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Of all the unusual uses to which soap has been put, perhaps one of the most unusual, and at the same time practical, is as a container or package. In this capacity soap serves a double purpose: as a package and the cleaning use for which it is primarily intended. The possibilities in the direction of soap as packaging are numerous, and the few that have been brought forth have only scratched the surface. As a packaging or a container for some other product such as perfume, powders and similar toiletries it reduces, if not, in some cases, actually eliminates the need for paper or metallic or some other form of war scarce wrapping material. While its initial appeal will be the novelty, it will also abpeal to the woman's sense of economy. Container shown is by Para Ti Corp., New York.

Long War-Low Soap Ration

In the event of a long war, it has been estimated by the War Production Board's Office of Civilian Supply in a report to Stabilization Director James P. Byrnes that the United States might have to get along on 67 per cent of the soap consumed in 1939. This percentage is the equivalent of a bedrock civilian consumption figure of 15 pounds a year. In issuing the report it was pointed out that "under the British ration system, the annual consumer consumption will average about 13 pounds per capita; this is about as low as the British think they can go." The quota for the United States was figured on the basis of a total consumption of 1,905,000,000 pounds divided by a population of 127 million. The 1,905,000,000 figure is 67 per cent of the estimated consumption in 1939. The report states that ". . . these estimates are for requirements for soap by ultimate consumers on a retail level. Actually the production of soap is inseparably connected with the production of glycerine, and the requirements

for glycerine are most likely to control the industry."

Estimates indicate that the United States' annual civilian per capita consumption in 1942, a peak year, was close to 27 pounds. Before restrictions, the British per capita figure was only about 20 pounds. In other words, the United States would take a 12 pound cut as compared to seven for the British.

Rate Wood Container Buyers

Priority assistance in the purchase of wooden containers and those made from corrugated and solid fiber has been granted to a host of products for civilian and military uses based on their essentiality to the war effort. This step was taken in the wooden and fiber shipping container Order P-140, issued February 24, by the War Production Board. Five lists of products were set up with priority ratings ranging from AA-1 to AA-5. The first two lists include war material, certain canned foods, medical supplies and Lend-Lease products. The third list carries chemicals, except those on list 4, and drugs,

food, building materials, etc. List 4 is devoted mainly to another group of chemicals, including such items as paradichlorobenzene, soda ash, dry boiler compounds and dry detergents (except those containing more than five per cent caustic soda or caustic potash and excepting synthetic wetting agents). Products on List 4 are given an AA-4 priority rating. Waxes and polishes, the only other products from the fields of soap or sanitary chemicals are found on List 5, where they are assigned an AA-5 priority rating.

Those products listed are not the only essential products being produced, and they will not require all of the containers produced, it was stated in issuing the order. Accordingly, there will be many containers available for products not listed. If a producer or shipper experiences difficulty in securing containers without a rating he may apply for one on Form PD-802.

New Soap Firm

Clerc Chemical Corp., Newark, N. J., a newcomer to the field of soap and sanitary chemicals, is planning to concentrate on the manufacture of salt water soaps and floor waxes. Their plant in Newark, N. J., which is nearing completion was designed by Alan Porter Lee, industrial architect, New York. Clerc submitted the low bid on 150,000 pounds of salt water soap in a recent opening by the Panama Canal, Washington, D. C. Arnaud Clerc is president and Frederic D. Loeb, vice-president.

Daniels Quits As Fats Chief

T. L. Daniels of Archer-Daniels-Midland Company, Minneapolis, for the past year chief of the Fats and Oils Branch of the Food Distribution Administration, Department of Agriculture, in Washington, quit that post on February 5 for a three months leave of absence. He was succeeded by Robert Capps of Zimmermann-Alderson-Carr Co., New York, who was appointed acting chief. Mr. Carr was formerly assistant chief of the Fats and Oils Branch.



PQ SILICATES OF SODA YOU SHOULD KNOW:

- "N"—Popular low alkaline solution, 41° Baumé. Approximate ratio: 1:3.22.
- "K"—More alkaline than "N", a 47° Baumé solution. Approximate ratio: 1:2.90.
- "C"—Alkaline solution, 59.3°
 Baumé. Approximate ratio: 1:2.00.
- **SS-C-Pwd.**—Anhydrous powdered sodium silicate. Ratio: 1:2.00. Slowly soluble.

Ask for Bulletin 17-1 which describes 30 PQ Silicates.

LESS FAT-JUST AS MUCH SOAP

 It's a knotty problem to meet continued demands for effective detergency while whittling down fats and oils consumption.

But soap makers already are studying formulae and trying new ways of using Silicates of Soda—PQ Silicates of Soda. In some soaps with new raw materials, it is pos-

sible to add higher percentages of silicate. In others, a different grade of silicate may improve the volume and stability of the suds.

In any case PQ Technicians are happy to discuss your problem. Let us furnish PQ Silicate of Soda samples for your own laboratory experiments.



PHILADELPHIA QUARTZ CO.

SILICATES OF SODA

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Name Special TGA Committee

A special committee to work on problems of particular interest to manufacturers of proprietary toilet goods, as distinct from cosmetics, has been appointed by the Toilet Goods Association. These products include toothpaste, tooth powders and other dentifices, shaving creams and hair preparations. Chairman of the new committee is John S. Norton of Lambert Pharmacal Co., St. Louis. Other members are:

William M. Bristol of Bristol Myers Co., Hillside, N. J.; F. S. Dieterich, Mennen Co.; Edgar F. Hoefer, Lucky Tiger Manufacturing Co.; E. B. Hurlburt, J. B. Williams Co.; A. E. Johnson, Colgate-Palmolive-Peet Co.; H. J. Lehman, Wildroot Co.; M. Michelin, Pinaud, Inc.; Arthur Richardson, Chesebrough Manufacturing Co.; Ralph B. Semler, R. B. Semler Co.; and Stephen L. Mayham, executive secretary, Toilet Goods Association.

Phila. Quartz Advances Baker

Chester L. Baker, chemical director of Philadelphia Quartz Co., Philadelphia, has just been named vice-president of the company in charge of manufacturing and engineering. Mr. Baker obtained his chemical degree from the University of California in 1925, joining Philadelphia Quartz Co. of California two years later. He is the original developer of the method of commercially manufacturing sodium metasilicate penetahydrate and other crystalline alkali metasilicates and has done considerable work on commercial detergent and adhesive engineering.

Announce New Fatty Acids

Emery Industries, Inc., Cincinnati, have announced a new series of special solid fatty acids. These new solid fatty acids range from high percentages of palmitic acid to high percentages of stearic acid. They are produced wholly from animal fats and possess entirely different physical and chemical characteristics than the ordinary commercial grades of stearic acid heretofore being sold.

The new fatty acids show not only differences in physical characteristics such as hardness, shrinkage, crystal structure, etc., but when reacted chemically produce finished materials having different properties than those obtained with the usual grades of stearic acid, such as solubility, gelling of soap produced and other features. This is the first time, according to the manufacturer, that fatty acids of this type have ever been produced from fats of animal origin. A number of the acids from this series are now in commercial use for specific purposes where their unique properties are particularly adapted. Commercial quantities are now reported available.

Report on Tin Recovery

More than 2,300,000 pounds of collapsible tin tubes were received for reclamation by the government agency, the Tin Salvage Institute, between April 1, 1942, and January 1, 1943, according to W. M. Rose, president of the Institute, in a report just made public. The WPB order, M-115, which requires the purchaser of toothpaste or shaving cream to return an empty tube at time of purchase of fresh goods, went into effect on April 1, 1942 as a measure to conserve the nation's tin supply for use in war production. So far more than 680,000 pounds of the metal has been recovered and more is in process of reclamation. Most recent figures available indicate that the tubes are still flowing in at the rate of hundreds of thousands of pounds each month. Nearly 400,000 pounds were received in December alone. In addition to the tin that is being recovered, a sizable quantity of lead and aluminum is also being added to the nation's stock pile, Mr. Rose said. Serving on the operating committee of the Institute are Lee H. Bristol, of Bristol-Myers Co., George MacGregor of Colgate-Palmolive-Peet Co., and Charles Luckman, of Pepsodent Co.

Slapin Standard Sales Director

Philip Slapin has been appointed sales director of Standard Synthetics, Inc., New York, specialists in essential oils and aromatics. He will call on the trade in New York City, New Jersey, Philadelphia, and Baltimore.

Maj. Merrill Transferred

Major Walter D. Merrill, president of Joseph Turner & Co., Ridgefield, N. J., and now on active duty with the U. S. Army Air Corps, has been transferred to the Air Corps staff headquarters of the A-3 Division and is located in the Pentagon Building, Room 3D-1022, Washington. Major Merrill was formerly chief test pilot at Stewart Field, Newburgh, N. Y., the training center for West Point Cadets in the Air Corps. He is a graduate of West Point and prior to his entering the chemical business 12 years ago was an officer in the regular U. S. Army. He is a past president of the Salesmen's Assn. of the American Chemical Industry.

P & G Again Heads Ad List

Procter & Gamble Company still heads the list of advertisers in magazines, radio and farm papers, on the basis of the figures for the year 1942, published last month by Printers' Ink. Total spent by P. & G. was \$14,313,-668, as compared with \$12,988,877 in 1941. Lever Brothers were fourth on the list, with expenditure of \$8,132,118 in 1942 as against \$6,099,344 in 1941. Colgate - Palmolive - Peet Co. was in eighth position, spending \$5,258,253 in 1942, a drop from the \$6,811,017 spent in 1941. In tenth position was American Home Products Corp. Expenditures were \$4,557,439 in 1942 as against \$4,004,209 in 1941.

Conway Heads Continental Can

Carle C. Conway, chairman of the board of Continental Can Co., has just been elected president of the company, succeeding the late J. F. Hartlieb. Sidney J. Steele, formerly executive vice-president, was named to the newly created post of vice-chairman of the board. A series of other appointments included the elevation of Eugene J. O'Connor, in charge of general line sales, to the position of vice-president.

ADMA Meets May 2-4

The American Drug Manufacturers Association will hold its 32nd annual meeting, May 2-4, at the Palmer House, Chicago.



Fuel for the Flying Fortresses! Shipped in Crown Drums!

You can't solve a fuel shortage in the Southwest Pacific by build-

ing a pipeline. Fuel for the Flying Fortresses, for the tanks, the jeeps, for all the mechanical equipment must reach the remote outposts in drums... and in drums that can take a drubbing.

We don't know just where the Crown Drums

we supply to many oil companies will go. We couldn't tell you if we did. But we do know they are carrying high octane gas... and regular gas and oil to plenty of those places with the unpronounceable names where the Army, Navy and Marines are operating.

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Just another instance of how *Crown* is helping to win the war... by sending its regular products to the front... as well as by making special products for the Army and Navy.

CROWN CAN COMPANY, PHILADELPHIA · NEW YORK · Division of Crown Cork & Seal Co. · Baltimore, Md.

CROWN CAN

BIDS AWARDS

N. Y. Navy Bids

In recent openings by the New York Navy Purchasing Office, New York, for miscellaneous supplies, the following low bids were received: Ampion Corp., Long Island City, N. Y., \$1.36 on 500 wall soap liquid dispensers; Bourjois, Inc., New York, 12.99c Brooklyn, addition zone 1.00262c, zone 2, .00244c, zone 3, 1.506c, zone 4, 1.506c on 60,000 57 gm. jars powder soap liniment; Socony-Vacuum Oil Co. of New York, 8.05c on 32,000 lbs. commercial type grade A 130-132 degree F. paraffin wax.

Low Post Office Bids

The following low bids were entered in a recent opening by the Post Office Department, Washington, D. C., for miscellaneous supplies: Procter & Gamble Distributing Co., Baltimore, 11.37c on 3,000 lbs. of toilet soap; Colgate-Palmolive-Peet Co., Jersey City, N. J., 5.05c on 46,620 lbs. of laundry soap; Keppler Bros., New York, 12.7c on 1,500 lbs. wax.

Navy Roach Powder Bids

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Among the low bids entered in a recent opening for 1,500 lbs. type A roach powder exterminator, by the New York Navy Purchasing Office, New York, the following were received: Industrial Distributors, New York, 26c; A. G. Mattison, Portsmouth, New Hampshire, 29c; and Deco Products Co., New York, 35c.

Navy Insecticide Bids

Hockwald Chemical Co., San Francisco, and Michael & Pelton Co., Oakland, Calif., submitted low bids of 94c each on item 52A and 53B and 99.5c on item 52B and 99.9c on item 53A, respectively, on 27,000 gals. of insecticide to be delivered to Oakland, Calif., and 13,000 gals. of insecticide to be delivered to San Francisco, in re-

cent openings by the Navy Bureau of Supplies, Washington, D. C.

Low Navy Insecticide Bid

R. M. Hollingshead Corp., Camden, N. J., was the low bidder at 5.193c on 310,032 (2-oz.) containers of powder insecticide for body lice in a recent opening for miscellaneous supplies by the New York Navy Purchasing Office, New York.

Low Panama Canal Bids

The following low bids were entered in a recent opening for miscellaneous supplies by the Panama Canal, Washington, D. C.: \$824 by S.O.S. Co.; Chicago, on 13,000 lbs. of steel wool; 11.2c by Windsor Wax Co., Hoboken, N. J., on 3,000 lbs. of paste floor wax.

X-Ray Low on Insecticide Bid

A low bid of \$68 for 80 gallons of insecticide was submitted by X-Ray Insecticide Laboratories, New York, N. Y., in a recent opening for miscellaneous supplies by the Department of Agriculture, Washington, D. C.

N. Y. Navy Soap Bid

Laco Products, Baltimore, entered a low bid of 37c on 50,000 cakes of U.S.P. hard soap in a recent opening of the New York Navy Yard, N. Y.

Clerc Low on Green Soap

Clerc Chemical Corp., Newark, N. J., submitted the low bid of \$2,-412.50 on 25,000 lbs. green soap in a recent opening of the Veterans Administration Supply, Washington, D. C.

Du Bois Bid Low

In a recent opening for miscellaneous supplies by the New York Navy Purchasing Office, New York, Du Bois Soap Co., Cincinnati, Ohio, entered a low bid of 33c on 2,750 gallons of non-inflammable and non-toxic degreasing compound.

AMA Soap Award to Lever

The Agricultural Marketing Administration, Washington, D. C., gave Lever Bros. Co., Cambridge, Mass., the award for 100,000 lbs. of toilet soap at 12.752c, consisting of 804,000 cakes at 1.594c, in a recent opening for miscellaneous supplies.

American Wax Cleaner Bid Low

A low bid of 50c a gallon was submitted by American Wax Co., New York, in a recent opening of the Panama Canal, Washington, D. C., for an unspecified quantity of cleaner and polish.

Low P. O. Polish Bid

Fuld Brothers, Baltimore, submitted the low bid of 6.5c on 12,000 lbs. of metal polish in a recent opening by the Post Office Supply Department, Washington, D. C.

Ruth Lemmermeyer Swimmer

The interest shown in aquatic meets by Michael Lemmermeyer of Aromatic Products, New York, is only natural. His daughter Ruth, a member of the Women's Swimming Association A team, recently won the 400 yard Metropolitan Senior Free Style Relay Championship in concert with another young mermaid at the London Terrace pool, New York, on January 24.

Move N. Y. "Lightnin" Office

Mixing Equipment Co., manufacturers of "Lightnin" propeller type mixers, has shifted its New York office from 377 Broadway to 136 Liberty Street. Glenn J. Moorhead, formerly Pittsburgh representative for the company, has assumed the position of eastern divisional sales manager, with headquarters at the new location. C. F. Donovan will continue his duties as manager at the Liberty Street address. The home office of Mixing Equipment Co., is located at 1024-1040 Garson Avenue in Rochester, N. Y.

We offer

double duty perfumes for sprays • • •

With today's restrictions on pyrethrum our perfume compounds will effectively

mask the odor of synthetic killing agents

in your spray, as well as give your product an agreeable floral, bouquet, or neutral note.

I F your spray presents special problems, send us an unperfumed sample. We will be glad to work out an odor suitable for your particular product.

Schimmel & Co., Inc.

601 WEST 26TH STREET

NEW YORK, N. Y.

Chicago

Cincinnati

Cleveland

St. Louis

California Representatives: A. G. SPILKER & SONS

Los Angeles: 1709 W. 8th St. — Telephone: Exposition 0178 San Francisco: 216 Pine St. — Telephone: Exbrook 5323



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TRADE MARKS

The following trade-marks were published in the February issues of the Official Gazette of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Marks

BOTTLED GLOVES—This in all upper case letters, one word above the other, for a hand cleanser. Filed Sept. 17, 1942 by Irene Blake, Cosmetics, Inc., New York. Claims use since Aug. 4, 1942.

PHANTOM GLOVES — This is two lines of all upper case shawod lettering, the word "Phantom" above the other word, for a hand cleanser. Filed Sept. 17, 1942 by Irene Blake Cosmetics, Inc., New York. Claims use since Aug. 4, 1942.

ZERO—This in large bold letters for a multi-purpose cleanser. Filed Oct. 28, 1942 by Beacon Chemical Corp., Philadelphia, Pa. Claims use since Oct. 17, 1942.

AVENARIUS—This in black capital letters for a liquid wood preservative used as a fungicide and an insecticide. Filed Nov. 16, 1942 by Carbolineum Wood Preserving Co., Milwaukee, Wis. Claims use since Jan. 6, 1888.

DUETT—This in extra large, bold letters for a preparation for athlete's foot and other infections of the skin. Filed Nov. 20, 1942 by Duett, Inc., Cincinnati, Ohio. Claims use since May 6, 1939.

WHAT IS IT? INSECTINE—This in bold upper case letters in two lines superimposed on a can type dispenser for an insecticide. Filed Dec. 2, 1942 by William A. Shull, doing business as

The Velvetta Mfg. Co., Philadelphia, Pa. Claims use since 1903.

MLLE. CHARME—This in script lettering for soap. Filed Dec. 3, 1941 by Catherine K. Gordon, doing business as House of Gordon, Chicago, Ill. Claims use since May 10, 1940.

SPOTLIGHT—This in upper and lower case open lettering above the fanciful figure of a drum majorette for a dry cleaning fluid. Filed April 14, 1942 by York Pharmacal Co., St. Louis, Mo. Claims use since Nov. 1, 1941.

TUYA—This in lower case script letters, for soap. Filed Oct. 9, 1942. Claims use since July 15, 1942.

SBS-11—This in bold letters for a powdered hand soap. Filed Oct. 26, 1942 by Sugar Beet Products Co., Saginaw, Mich. Claims use since Oct. 20, 1936.

RANGER—This in bold, upper case letters for a toilet kit containing soap. Filed Nov. 4, 1942 by Alfred D. McKelvy Co., New York. Claims use since October 26, 1942.

CASTADERM—This in bold upper case letters for a dermatological preparation. Filed July 28, 1942 by The Lannett Co., Inc., Philadelphia, Pa. Claims use since Nov. 1, 1941.

ORLOFF—This in script letters for various types of soaps. Filed Nov. 25, 1942 by Nicholas W. Orloff, New York. Claims use since Nov. 10, 1942.

GERM-TROL—This in bold letters for germicides, disinfectants and deodorizers. Filed Oct. 10, 1942 by Stanley Home Products, Inc., Westfield, Mass. Claims use since Oct. 2, 1942.

BEE BRAND ROACH KILLER—This in blod letters in four lines, each word forming a line, for roach poison. Filed Dce. 18, 1942 by McCormick & Co., Inc., Baltimore, Md. Claims use since 1894.

MARY'S POLISH—This in bold letters within a black ring for a gen-

eral cleaner and polisher. Filed April 27, 1942 by Mary Bundzik, Johnstown, Pa. Claims use since March 10, 1942.

Trade Marks Granted

399,651. Polish for lacquered or varnished surfaces having cleansing properties. Filed by Star Chemical Co., Inc., Chicago, Ill., April 18, 1938. Serial No. 405,424. Published April 22, 1941. Class 16.

399,751. Toilet Soap. Filed by Chanel, Inc., New York, September 25, 1942. Serial No. 455,749. Published November 17, 1942. Class 4.

399,750. Liquid and paste cleaner for wood, metal, concrete, masonry and plaster. Filed by C. A. Nash & Son, Inc., Norfolk, Va., September 23, 1942. Serial No. 455,709. Published November 17, 1942. Class 4.

399,820. Semi-liquid cleaner for floors, walls, etc. Filed by Anthony Di Frances, Milwaukee, Wis., April 18, 1942. Serial No. 452,417. Published November 24, 1942. Class 4.

399,836. Liquid leather dressing. Filed by Roswell C. Barbour, doing business as the Barbour Company, St. Louis, Mo., July 8, 1942. Serial No. 454,097. Published November 24, 1942. Class 4.

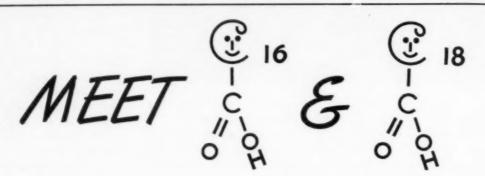
399,886. Paper towels. Filed by A. P. W. Paper Company, Albany, N. Y., September 11, 1942. Serial No. 455,466. Published November 24, 1942. Class 37.

399,887. Bathroom cleansing tissue, paper towels, toilet paper, and facial tissue. Filed by Crown Zellerback Corp., San Francisco, Calif., September 11, 1942. Serial No. 455,475. Published November 24, 1942. Class 37.

399,933. Liquid make-up for the body, particularly the limbs. Filed by Miner's, Inc., New York, N. Y., August 13, 1941. Serial No. 446,210. Published May 26, 1942. Class 6.

400,004. Toilet soap. Filed by Chanel, Inc., New York, N. Y., September 29, 1942. Serial No. 455,839. Published December 1, 1942. Class 4.

399,996. Preparations for the treatment of foot ailments. Filed by Mina Foster, doing business as Foster



Introducing Several New Members

The Emery family of chemicals adds a new, unique series of special Fatty Acids of Animal Origin whose physical and chemical characteristics differ widely from those now available commercially. They're designed to meet specific needs.

These solid Fatty Acids contain varying proportions of Stearic and Palmitic Acids, laboratory-controlled in manufacture to produce these new characteristics. They not only possess different physical characteristics such as Hardness, Shrinkage, Crystal Structure, etc. but when reacted chemically produce finished materials having entirely different properties from those obtained with the usual grades of Stearie Acid, such as solubility, gelling of soap produced, etc. ber

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Present grades of "commercial" Stearic Acid contain almost equal portions of Stearic C₁₀Acid, and Palmitic C₁₀-acid whose ratio remains virtually constant throughout the entire range of specifications.

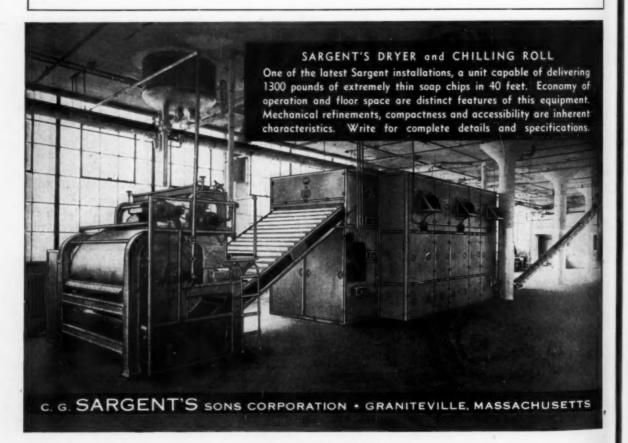
Write for exact specifications, outlining the requirement you're most interested in. Since usual commercial grades of Stearic are also available, your possible choice of solid acids covers a complete range of utility.

EMERY INDUSTRIES, INC. CINCINNATI, OHIO

EST. 1840



Makers of: EMERY'S Stearic Acids EMERY'S Oleic Acids Twitchell Oils Twitchell Reagents



Laboratories, Lansing, Mich., September 24, 1942. Serial No. 455,726. Published November 24, 1942. Class 6.

400,061. Ointment for the treatment of athlete's foot and other foot ailments. Filed by Elmer W. Lawson and Charles Monrow, Turlock, Calif., April 1, 1942. Serial No. 452,074. Published December 1, 1942. Class 6.

400,175. Caustic soda, caustic potash, carbonate of potash, bleaching powder, etc. Filed by Niagara Alkali Co., Niagara Falls, N. Y., October 7, 1942. Serial No. 456,028. Published December 1, 1942. Class 6.

400,144. Spray deodorants. Filed by Clyde Rowell, doing business 25 Rexclif Products Co., Portland, Ore., September 26, 1942. Serial No. 455,-805. Published December 1, 1942. Class 6.

400,077. Liquid make-up for the body, particularly the limbs. Filed by Bellin's Wonderstoen Co., Inc., New York, N. Y., July 9, 1942. Serial No. 454,110. Published December 1, 1942. Class 6.

400,126. Preparation for the treatment of irritations of the skin. Filed by Nyal Company, Detroit, Mich., September 21, 1942. Serial No. 455,670. Published December 1, 1942. Class 6.

400,138. Pine disinfectants, insecticides, deodorant blocks, and pipe and bowl cleaners. Filed by C. W. Schwank Corp., Baltimore, Md., September 25, 1942. Serial No. 455,770. Published December 1, 1942. Class 6.

400,053. Preparation for polishing and cleaning automobiles, furniture, finished painted, varnished and enameled surfaces, walls, floors, window shades, and venetian blinds. Gulco Chemical Co., Inc., Gulfport, Miss., October 13, 1941. Serial No. 447,736. Published December 8, 1942. Class 16.

Honor Hercules Adv. Mgr.

Theodore H. Marvin, advertising manager of Hercules Powder Co., Wilmington, has been named by Industrial Marketing, trade paper of the advertising field, as "Industrial Advertising's Man-of-the-Year." Hercules

has recently inaugurated an advertising campaign on "Hercules Land" that will show dramatic previews of the world that lies ahead in the post-war period through chemical progress.

Ball Bros. Own Aridor

Aridor Co., Chicago, manufacturers of closures for glass containers, is now owned by Ball Bros. Co., Muncie, Indiana. The company will continue to function as an independent unit in the manufacture and sale of caps. No change in management is contemplated, it was reported. Colonel R. G. Peck remains as president and R. G. Peck, Jr., as vice-president and sales manager.

Chicago Drug Assn. Meets

The Chicago Drug and Chemical Association reported a record turnout for their patriotic program honoring the U. S. Navy, February 25. Following luncheon at the Union League Club, three official Navy films were shown, their subjects being "The Navy and Its Ships," "The Bombing of Marshall Islands," and "Coral Sea and Midway Battles."

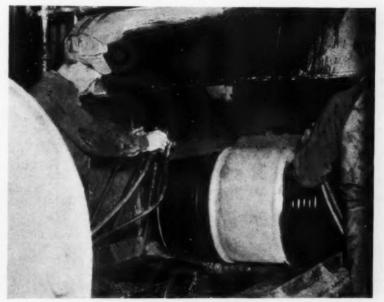
Plan Transportation Economies

The Drug and Cosmetics Transportation Industry Advisory Committee is scheduled to meet in Washington, March 4, to hear recommendations on possible ways to economize on transportation facilities within the industry. Specific suggestions have been made that supplies be bought from the closest suppliers consistent with purchase policies, that supplies not be ordered in such a way as to jam up unloading facilities and that an effort be made to coordinate rail and motor truck service to eliminate wasteful duplication.

Addresses Cotton Council

William G. Werner of the advertising department of Procter & Gamble Co., addressed members of the National Cotton Council of America at their recent annual meeting in Memphis, the title of his talk being "Promotion—Cotton's Opportunity." The Association of American Soap and Glycerine Producers has for some time past been taking an active part in promotion work of the Cotton Council, with special emphasis on the cotton washability theme.

One of the busiest laundries in the country over recent months has been the "used drum laundry" operated by the Newark Steel Drum Co. at Linden, N. J. The importance of commercial reconditioning plants has grown recently as manufacturers who had been using new drums exclusively are now required to reuse their old containers. The Linden plant is said to be capable of handling a half million reconditioned steel drums a year. An abrasive blast stream is employed in an American "Wheelabrator" blast cleaning machine designed by American Foundry Equipment Co., Mishawaka, Ind., for use by Newark Steel Drum Co.



943

With Glycerine-Free

FIVE TIMES as much SOAP

Big saving in production and overhead costs.

- SAPONIFICATION TIME IS ONLY 3 TO 4 HOURS CYCLE compared with the usual approximate 36 hour cycle necessary for whole oils.
- THE SAME AMOUNT OF STEAM, LABOR AND OVERHEAD will suffice for five times your present production, thus lowering unit costs.
- NO CHANGE IN EQUIPMENT IS NECESSARY and all salting out and bleaching operations can be eliminated.
- ▼ ABSOLUTE CONTROL OF QUALITY AND UNIFORMITY can be maintained with complete saponification, no shrinkage, and less possibility of turbidity.

Palm Oil F.A. Tallow Oil F.A. Corn Oil F.A. Soya Oil F.A. Cocoanut Oil F.A. Replacements



†Helioline †Distoline Peanut Oil F.A. Cottonseed Oil F.A. High Titre Cottonseed Oil F.A. effe

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† Vegetable Oleic Acid

* Reg. U. S. Pat. Office

RAW MATERIALS FOR THE SOAP INDUSTRY

FATTY ACID SUBSTITUTES FOR COCONUT OIL

Mixtures of Vegetable oil fatty acids to replace coconut and other high-glycerine content oils now unavailable to many soap makers. It will pay you to investigate these replacement materials at once. Write for samples and prices.

Caster Oil Corn Oil Cattonseed Oil Oilve Oil

DRY ALKALIES

A recent innovation in Welch, Holme &

Clark service is the mixing of dry alkalies for private formula products. Let us handle

WHITE MINERAL OIL

PETROLATUM

WELCH, HOLME CLARK

563 GREENWICH STREET

ESTABLISHED 1838

NEW YORK CITY

As of March 2, 1943

ONTINUED shortages in oil and fat supplies had a very deadening effect on the market again last month, precluding the possibility of any sizeable amount of market activity. With supplies short, there was still a goodly share of interest shown by buyers, nevertheless. There seems to be no immediate prospect of relief from the tightness of the oil, fat and grease situation. The demand for fats in 1942 as measured by consumer income is currently stronger than it was in World War I, according to the U. S. Department of Agriculture's latest issue of The Fats and Oils Situation. In the past year a 27 per cent price advance was recorded in domestic fats and oils, and in 1917 there was a rise of 36 per cent, says that paper. The demand will be even stronger in 1943, it is added.

The story that coconut oil was still coming into this country was checked and found to be true. Precise tonnage of the imports was not revealed, nor was the origin of the shipments. However, there are a number of sources still beyond reach of the enemy from which the shipments may have been made.

One hopeful note on the fat and oil front is the recently revealed indication that following a record fall pig crop, the spring 1943 crop may exceed last year's by as much as 24 per cent, and hog marketings may reach 100 million head in 1943. Similarly it was made known by the Department of Agriculture that the indicated production of inedible tallow and greases for the 1942-43 period will reach 1,950,-000,000 pounds as compared with 1,732,000,000 pounds for the same period in 1941-42. The tallow shortage on the Pacific Coast is reported becoming more acute and soapers are being hit hard by it. Of all the synthetic rubber to be made in the United States, 15 per cent will be produced on the Pacific Coast and will take all the available high titre tallow, leaving soapers to obtain supplies wherever else they may be available.

Linseed oil prices keep steadily rising, paralleling similar price developments in flaxseed. Crushing facilities are still taxed fully in an effort to finish up last year's bumper crop. Little real buying interest has been noted recently for linseed since a price ceiling is thought to be in the offing.

Fatty acids were characterized by their firm tone and the general steadiness of the market throughout.

Essential oils and aromatic chemicals perked up some recently after a period of wallowing. What activity there was, and there was a fair share of it, was felt to come as a direct result of dwindling supplies. Although demands were very real in some lines, they were subject mostly to partial fulfillment. Talk still persists regarding importations from Madagascar in the fairly near future, but so far developments do not seem to have gotten beyond the talking stage. A few price changes were noted, mostly on the slackening side.

A development of more than passing importance, recorded on the last day of February, was the rise in the price of ethyl alcohol authorized by the Office of Price Administration for the West Coast. Because of a rise in the cost of molasses, and information showing that the costs of major producers on the West Coast are higher than at first indicated, the OPA authorized an advance of five cents a gallon in the basic maximum price of West Coast ethyl alcohol. It applies to all manufacturers in the states of

Washington, Oregon and California, except one, whose ceiling was reduced one-cent a gallon. A more liberal container differential was also provided for in the amendment which, after allowances for the higher cost of containers on the West Coast, made them consistent with those provided for alcohol producers in other parts of the country.

A report was received of the arrival last week of three ships in New York, bringing approximately 1,300 tons of pyrethrum from Kenya Colony. As yet the shipment has not been allocated by the War Production Board, although most of it is reported earmarked for the army. Since it is unlikely there will be any more shipments received before early summer, the prospects of an improvement in the deteriorating supply situation is most unlikely.

Reports on German Soap

Soap in Germany today consists largely of clay, bound with 18 per cent or less of fatty soap substance, says Dr. Olga Ittner, writing in a recent issue of *The Daily Telegraph*, London. Germany's ration is said to be three and one-half kilograms per person per year, with inhabitants of the occupied areas getting only about one kilogram each. Synthetic fats are said to have been almost a complete failure in solving the German soap problem, due to the high cost and the great amount of coal needed.

Announce Metsal Technical

Aromatic Products, Inc., New York, has just announced development of "Metsal Synthetic Technical," a replacement for methyl salicylate for technical purposes such as the perfuming of fly sprays, shoe polish, etc.



is ready for immediate shipment without priority rating . . .

Schundler Bentonite, known as the "clay of 1,000 uses" is ready for immediate shipment without priority rating. It is plentiful and is not on the list of critical materials. Prompt shipments are being made without "red tape."

AN IDEAL "SUBSTITUTE"

As a "substitute" or alternate for other materials—which may be scarce now—Schundler Bentonite is an ideal material used either alone or in combination. Investigate its application to your problem today.

" 1,000 USES"

A few typical uses of Schundler Bentonite are: Purification of water supplies . . . Insulation blocks, plasters and cements . . . In Ceramic bodies to improve the green strength of lean clays and the quality of fired products . . . In Rubber latex adhesives . . . Emulsions and aqueous suspensions of bitumens . . . Compounds for machining and drawing metals . . . Polishes and cleaners . . . Adhesives and sizings in combination with starches . . . Pharmaceuticals and cosmetics . . . Paper manufacture to inhibit gumming of screens . . . Fluxing compounds for arc welding . . . Coating walls of asphalt containers.

TECHNICAL SERVICE INCLUDED

Schundler technical service goes with every order for Schundler Bentonite...a service backed by the largest scientific staff working in the best equipped laboratory in the Bentonite industry. Your inquiries are invited.

F. E. SCHUNDLER & CO., INC.

524 RAILROAD ST.



KRANICH

Shampoo

Liquid Olive Oil Soap

Liquid Vegetable Oil Soap

40% and 30% (Only)
To replace coconut oil soaps

MO

Ami

Carl

Cres

Feld

Full

S

Lim

Mer

Nap

Ort

Petr

Pot

Pun

Ros

Sili

Powdered Soap

U. S. P. Castile (Only)

Potash Soaps

Soft Potash 40% Hard Potash 70% U.S.P. XI Green

Scrub Soaps

Plain, Pine, Sassafras

KRANICH SOAP COMPANY

55 Richards St.

Brooklyn, N. Y.

SOAPS

PRICES

(As of March 2, 1943)

Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities.

Chemicals			Soda Sal., bbls	1.20 14.20	1.40 18.00
Acetone, C. P., drums lb. Acid, Boric, bbls., 99½% ton Cresylic, drums gal. Low boiling grade gal. Muriatic, C. P., carboys lb. Oxalic, bbls. lb. Alcohol, Ethyl, drums gal. Complete Denat., SD1, dms., ex. gal.		\$.09 131.00 .83 .83 — .12½ 12.05½ .69	Sodium Chloride (Salt) ton Sodium Fluoride, bbls. lb. Sodium Bisulfate 100 lb. Sodium Metasilicate, anhyd. 100 lb. Granulated 100 lb. Sodium Pyrophosphate 100 lb. Sodium Silicate, 40 deg., drum 100 lb. Drums, 52 deg. wks 100 lb.	.08 2.25 4.00 2.50 5.28 .80 1.40	.08 ½ 2.50 5.30 3.55 6.80 1.20 1.80
Alum. Potash lump, bbls lb. Ammonia Water, 26°, drums lb. Ammonium Carbonate, tech., drums . lb.	.04½ .02¼ .08¼	.02 1/2	Tar Acid Oils, 15-25%gal. Triethanolamine lb. Trisodium Phosphate, bags, bbls. 100 lb.	.27½ .19 2.70	.33 ½ .20 4.15
Bentonite ton Bleaching Powder, drums 100 lb. Borax, pd., bbls., bags ton	25.00 2.50 45.00	51.00 3.60 71.00	Oils — Fats — Grea		
			Babassu, tanks, futureslb.	.1110	Nom.
Carbon Tetrachloride, car lots gal. L. C. L. gal. Cresol, U.S.P., drums lb.	.73 .80 .10¾	1.17 1.27 .11¼	Castor, No. 1, bbls	.151/4	.16
Cresote Oilgal.	.141	.151/2	Manila, tanks, N. Ylb.	No Pri	ces
Feldspar, works ton	17.00	19.00	Tanks, Pacific Coast, futureslb.	No Pri	
Formaldehyde, bbls	.051/2	.061/4	Copra, bulk, coastlb.	No Pri	
Fullers Earthton	8.50	15.00	Corn, tanks, Westlb.	.1234	.15 1/2
Glycerine, C.P., drumslb. Dynamite, drumslb.	.18 34	.19 1/4	Cottonseed, crude, tanks, milllb. PSY, futureslb.	.12%	.14 1/8
Saponification, drumslb.	.1234	.14 3/4	Fatty Acids— Corn Oil, tanks, Chicagolb.	.141/2	.15
Soap lye, drumslb.	.11½	-	Coconut Oil, tanks, Twitchell, Chi. lb.	.181/2	.19
Lanolin, U.S.P., hydrous, drums lb.	.29	.32	Cotton Oil, tanks, Chicagolb.	.14	.14 1/2
Anhydrous, drumslb. Lime, live, bblston	6.25	16.00	Settled soap stock, Chicagolb.	.03%	.04
			Boiled soap stock, 65%, Chi lb.	.04 %	.05
Mercury Bichloride, drumslb.	2.24	2.39	Foots, 50%, Chicagolb. Castor Oil, split, tanks, N. Y lb.	.20 %	.2114
Naphthalene, ref. flakes, bblslb.	.08	.081/2	Linseed Oil, split, tanks, N. Y lb.	.181/2	
Orthodichlorbenzene	.06	.08 1/2	Distilledlb.	.21	.211/2
Paradichlorbenzene, drumslb.	.11	.15	Myristic acid, distilled, tanks, N.Y. lb.	.19	.191/2
Petrolatum, bbls. (as to color) lb.	.03 %	.071/4	Palm Oil, white tanks, N. Ylb.	No Pri	
Phenol (Carbolic Acid) drumslb.	.10 1/2	.111/4	Single distilledlb. Soybean Oil, split, tanks, N. Ylb.	No Pri	ces
Pine Oil, drumsgal.	.55		Distilledlb.	.15	-
Potash, Caustic, solid	.061/4	.06%	Red Oils, bbls., dist. or sapon lb.	.11%	-
Flake, 88-92% lb. Liquid, 45% basislb.	.0314	.071/2	Tankslb.	.1114	-
Potassium Carbonate, solidlb.	.06 1/2	.06%	Stearic Acid, saponif.		
Liquid	.03	.031/2	Double pressedlb.	.14	_
Pumice Stone, coarselb.	.03 %	.045	Triple pressedlb.	.17	_
Rosins (net. wt., ex dock, New York)— Grade D to H	3.56	4.15	Greases, choice white, tankslb. Yellowlb.	.08% .08%	_
Grade I to N	4.25	4.35	Lard, city, tubs	.14	-
Grade WG to X 100 lb. Rotten Stone, dom., bagslb.	4.60 .0128	4.66	Linseed, raw, bbllb.	.1460	.1480
Silica ton		27.00	Tanks, rawlb.	.1420	-
Soaps— Tallow Chip, 88%	17.00	.11%	Olive, denatured, bbls., N. Y. gal. Foots, bbls., N. Y	3.75 .19	4.00 Nom.
Powder, 92% lb.	.11%	.12	Palm, Sumatra, cif. New York, tanks lb.	No Pri	ces
Powdered, White Neutral lb.	.251/2	.42	African, tanks, ex. shiplb.	.081/4	Nom.
Ulive Oil Paste	.40	-	Palm, kernellb.	No Pri	
Shampoo Base	.18	.20	Peanut, crude, tanks, milllb.	.13	Nom.
Liquid Concentrate, 30-32% gal.	.75	.79	Soya Bean, domestic, tanks, crudelb.	.11%	Nom.
Soda Ash, cont., wks., bags, bbls. 100 lb. Car lots, in bulk	1.15	3.25	Stearin, oleo, bblslb.	.1054	-
Soda Caustic, cont., wks., solid 100 lb.	2.30	3.15	Tallow, special, f.o.b. N. Y	.081/2	_
Flake	2.95	3.55	City, ex. loose, f.o.b. N. Ylb.	.08%	-
Liquid, tanks, 47-49% 100 lb.	1.92 1/2	1.95	Teaseed Oil, crudelb.	.29	Nom.

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Not until Valencia — the standard of American Pumice—was discovered at Grants, New Mexico, was it thought that a domestic pumice could match the quality of imported Italian Pumice. This inexhaustible deposit at Grants is true pumice stone and not a volcanic ash. It is physically and chemically equal in every respect to the now unobtainable Italian Pumice. • The Valencia plant's output of grades for every need is rigidly under control for particle size, purity, weight and color.



Check this table comparing Valencia with the highest grade of imported Italian Pumice. See for yourself that Valencia is truly the standard of American Pumice.

Silica	American Pulverized Per Cent	Italian Select	1
Alumina	72.90	Per Cent 73.24	I
Iron Oxide	11.28	10.61	ı
" Only Orid	.86	1.57	ı
Calcium Ovid-	.06	.10	
magnesium O.:	.80	1.10	
2000	.36	.40	
arusn	3.64	3.03	
olphuric Anhudet	4.38	5.58	
oss on ignition	.03	.05	۵.
	5.20	40.18	2.

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Essential Oils			Aromatic Chemica	als	
Almond, Bitter, Artificiallb.	\$3.50	\$3.75	Acetophenone, C. Plb.	\$1.55	\$1.60
Bitter, F.F.P.A. lb.	4.75	5.00	Amyl Cinnamic Aldehyde	_	-
Sweet, cans lb.	1.85	1.95	Anethollb.		2.40
Anise, cans, U.S.Plb.	3.25	3.60	Benzaldehyde, tech		.55 2.75
Bay, 55-66% phenols, cans lb.	1.60	2.10	Benzyl, Acetate		Nom.
Bergamot, coppers lb.		Nom.	Alcohollb.		.75
Artificiallb.	2.25	6.50	Citrallb.		7.00
Birch Tar, rect., cans lb.			Citronellal		3.25
Crude, canslb.	_	_	Citronellol		7.25
Bois de Rose, Brazilianlb.	4.75	5.00	Coumarin		3.25
Cayennelb.		_	Diphenyl oxide		.50
Cade (juniper tar), drumslb.	1.50	Nom.	Eucalyptol, U.S.P.		2.75
Cajeput, tech., drumslb.	_	2.10	Eugenol, U.S.P. lb.	2.75	2.80
Calamus, canslb.	_		Geraniol, Soaplb.		3.00
Camphor, Sassy, drums	_		Other grades		4.00
White, drumslb.	_	_	Geranyl Acetate		Nom.
Cananga, native, cans	17.00	17.50	Heliotropin lb. Hydroxycitronellal lb.		8.75
Rectified, cans	18.25	20.00	Indol, C. P		30.00
Cassia, Redistilled, U.S.P.	10.50	12.00	Iononelb.		3.95
			Isoborneollb.		.90
Cedar Leaf, cans	1.05	1.35	Iso-bornyl acetatelb.	.80	.95
Cedar Wood, light, drums lb.	.75	1.00	Iso-Eugenollb.		-
Citronella, Java, drumslb.	-	_	Linoloollb.		7.00
Citronella, Ceylon, drumslb.	1.20	1.40	Linalyl Acetatelb.		7.25
Clove, U.S.P., canslb.	1.80	2.00	Menthol, naturallb.		10.00
Eucalyptus, Austl., U.S.P., canslb.	1.15	1.40	Synthetic, U.S.P. lb. Methyl Acetophenone lb.	13.00	19.00
Fennel, sweet, cans	3.60	-	Anthranilatelb.	2.20	2.35
Geranium, African, canslb.	30.00	Nom.	Paracresollb.		.40
Bourbon, canslb.	24.00	-	Salicylate, U.S.P		4.45
Turkish (Palmarosa)	5.25	5.50	Ketonelb.		4.60
Hemlock, cans	1.20	1.25	Xylollb.	1.40	1.80
Lavender, 30-32% ester, canslb.	9.00	9.25	Phenylacetaldehydelb.		6.00
Spike, Spanish, cans lb.	4.25	4.35	Phenylacetic Acid		1.90
Lemon, Ital., U.S.P	-	Nom.	Phenylethyl Alcohol lb. Rhodinol lb.		2.50
Cal	3.00	-	Safrol lb.		2.45
Lemongrass, native, cans lb.	2.65	2.75	Terpineol, C.P., dra		
Linaloe, Mex., cases	4.25		Canslb.	.43	-
Nutmeg, U.S.P., cans lb.	5.25	5.50	Terpinyl Acetate, 25 lb. canslb.		_
Orange, Sweet, W. Ind., cans	6.00	6.25	Thymol, U.S.P.		Nom.
Italian cop	8.00	Nom.	Vanillin, U.S.P.		2.75
Distilled lb.	1.00	_	Yara Yaralb.	1.80	1.85
California, expressedlb.	1.65	_	Insecticide Materia	als	
Origanum, cans, tech	2.75	2.90	Insect Powder, bblslb.		.30
Patchoulilb.	8.00	8.50	Pyrethrum Extract		
Pennyroyal, dom	-	_	20 to 1gal.		6.00
Imported	3.15	3.25	30 to 1 gal. Derris, powder—4% lb.	8.85 .31	9.00
Peppermint, nat., canslb.	5.50	5.75	Derris, powder—5% lb.	.35	-
Redis., U.S.P., cans lb.	6.00	6.25	Cube, powder—4%	.31	-
Petitgrain, S. A., cans lb.	1.95	2.20	Cube, powder—5% lb.	.35	-
Pine Needle, Siberian lb.	3.00	3.25	Squill, red, dried lb.	.85	1.00
Rosemary, Spanish, cans	2.25	2.30	117		
drumslb.	2.10	2.15	Waxes		
Sandalwood, dom., dist., U.S.Plb.	5.85	6.25	Bees, whitelb.	.57 .3750	.63
Sassafras, U.S.P. lb.	2.00	2.20	African, bgs. lb. Refined, yel. lb. lb.	.5250	.6050
Artificial, drums	2.00	_	Candelilla, bgs. (crude) lb.	.38	_
Spearmint, U.S.P. lb.	_	3.40	Carnauba, No. 1, yellowlb.	.8325	.8925
Thyme, red, N. F	3.25	3.50	No. 2, N. Clb.	.7575	.8175
White, N. F.	3.50	3.75	No. 3, Chalky		.7725
Vetiver, Java	42.00	50.00	Ceresin, yellow lb. Montan Wax, bags lb.	.131/2	.18
Ylang Ylang, Bourbon	_	-	Paraffin, ref., 125-130		.0560
Morreh 1943		. 50	AD		55

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By the salvaging of waste fats the government is able to supplement its production of glycerine for munitions.

These salvaged waste fats are of such varied qualities that they require extensive treatment to remove impurities, colors and odors.

Treatment of waste fats with Nuchar Active Carbon either before or after splitting will remove these disagreeable colors and odors effectively.

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A section of SOAP devoted to the technology of oils, fats, and soaps published prior to Jan. 1, 1932, as a separate magazine under the title, Oil & Fat Industries.

Rapid Determination of Oil Samples

By S. Kiczales

United States Customs Laboratories

VERY oil chemist, at some time or other, has had to make a rapid determination of an oil sample that was contaminated with moisture. Marked amounts of moisture greatly lower the saponification value of the oil if the regular procedure is followed. The regular procedure consists of transfering a weighed amount of the oil or fat (about three grams) to an Erlenmeyer flask, adding 25 cc. of neutral 95 per cent alcohol and 25 cc. of 0.5 N alcoholic potash, boiling for one and one-half hours on the steam bath, and then back-titrating with 0.5 N acid.

To show how greatly the saponification value of an oil or fat is lowered by the presence of moisture, the following determinations were made by deliberately adding water to anhydrous oils and fats. Column I (above right) shows the saponification value of the anhydrous oil or fat obtained by the regular procedure. Column II lists the oil or fat. Column III is the saponification value obtained when water is deliberately added to the substance in Column II. The figures in the parenthesis indicate the amount of water and 95 per cent neutral alcohol added to the

Column	I Column II		Column III
190.6	Perilla Oil	5.92	(25 cc. H ₂ O)
191.2	Soya Bean Oil	0.34	(25 cc. H ₂ O)
184.4	Cod Oil	1.25	(20 cc. H2O plus 5 cc. alcohol)
178.9	Castor Oil		(10 cc. H2O plus 15 cc. alcohol)
193	Chinese Wood Oil		(10 cc. H2O plus 15 cc. alcohol)
181.5	Pollock Oil		(10 cc. H ₂ O plus 15 cc. alcohol)
191	Soya Bean Oil		(5 cc. H ₂ O plus 20 cc. alcohol)
219.6	Shaving Soap Fatty Acids		(5 cc. H.O plus 20 cc. alcohol)

oil or fat in addition to the 25 cc. of alcoholic potash.

The conclusion to be deduced from the above results is that the saponification value of a fatty substance determined under the ordinary procedure (using alcohol in the saponifying medium) is in most cases greatly lowered in the presence of sizeable amounts of moisture unless the fatty substance (e. g., castor oil or fatty acids) is freely soluble in alcohol.

To overcome this difficulty, the following determinations were made

by substituting the indicated solvents for alcohol (shown in table below). These results indicate that the saponification value of a fatty substance even in the presence of large amounts of moisture can be accurately determined if petroleum ether is added to the saponifying medium.

Procedure for determination: Accurately weigh about 3.0 grams of the thoroughly mixed sample. Transfer to a 200 cc. Erlenmeyer flask, add 25-40 cc. of neutral petroleum ether having a boiling range of 40-60° C. Add

Column	I Column III Column III													
188.3	Maize Oil	21.9 (5 cc. H ₂ O plus 20 cc. glycerine)												
184.3	Rice Oil	159.7 (5 cc. H ₂ O plus 20 cc. glycerine)												
183.2	Cod Oil	183.4 (5 cc. H2O plus 20 cc. petroleum ethe												
186.9	Sapote Nut Oil	186.7 (5 cc. H2O plus 20 cc. petroleum ethe												
202.6	Palm Oil	202.4 (5 cc. H2O plus 20 cc. petroleum ethe												
188.3	Maize Oil	188.6 (5 cc. H ₂ O plus 20 cc. petroleum ethe												
184.3	Rice Oil	184.4 (5 cc. H2O plus 20 cc. petroleum ethe												
198.4	Palm Oil	198.2 (5 cc. H ₂ O plus 20 cc. petroleum ethe												

25 cc. of 0.5 N alcoholic potash, stopper with air condenser and heat on steam bath for one and one-half hours. Back-titrate with 0.5 N acid. Run blank at same time. Calculate saponification value of the sample. Divide this result by the usual saponification value of the oil or fat present in the sample to obtain the percentage of oil or fat present in the sample.

By use of the above method, the analyst is able (1) to determine the amount of fat or oil in a mixture of fat or oil and water (such as foots or soapstock) by a simple saponification instead of separating out and weighing the fatty acids, (2) to determine the amount of free oil in a soap or soap solution without first drying it.

Examples: A cottonseed oil foots has a saponification value (as determined by the above method) of 112. The percentage of cottonseed oil is 112/195 = 57.4 per cent. A palm oil soap has a saponification value of 15. The percentage of free oil in the soap is 15/200 = 7.5 per cent.

Dry Cleaning Leather Coats

After spots and stains have been removed from leather coats by the usual procedures for spot removal, the coats are dry cleaned in a special solvent as follows: Clean for 10 minutes in a machine containing 21/2 pounds of paraffin to each 25 gallons of naphtha. No soap is added. Remove from the washer and extract lightly to remove the greater part of the cleaning solvent. Tumble the garments cold for 20 minutes. Hang in a room with a good circulation of warm air,-not above 120° F. The addition of paraffin has the feature of keeping intact, or restoring, the fat-liquor content of the leather which is reduced by the dry cleaning process alone. It helps restore the good appearance of the leather.

After drying, the life of the leather is further renewed by sponging or spraying the garment with a sulfonated oil, preferably sulfonated castor oil, which can be mixed with water for its application to the leather. The amount of sulfonated oil or its concentration in water, depends entirely

on the condition of the leather and to what extent it is "fat-free." The concentration of soluble oil may vary from 1 to 25 per cent; the oil can be mixed into water by simple agitation. Go over the garment, placed on a hanger to remove wrinkles, as many times as needed, letting it stand several minutes or up to an hour after each application. Smooth leather coats should finally be redressed with a wax neutral leather cream in order to produce a surface dressing and protect the fat liquor in the leather. Leland G. Stockdale. Laundry & Dry Cleaning J. of Canada 23, No. 1, 7-8, 22 (1943).

Bellier Index

The Bellier index was determined as follows: 1 cc. of clear oil and 5 cc. of 8 per cent alcoholic potassium hydroxide solution were placed in a 100-cc. Erlenmeyer flask. The flask was heated under a reflux on the steam bath for 10 minutes, cooled, and 50 cc. of 70 per cent ethyl alcohol and 1.5 cc.

of dilute acetic acid were added (1.25 cc. of dilute acetic acid equal 5 cc. of 8 per cent alcoholic potassium hy. droxide solution). The alcoholic solution was progressively cooled with constant agitation. The temperature of the initial crystallization was taken as the Bellier index.

The Bellier index and titer were compared for several oils and were: peanut oil 40, 31.6; Bahia coconut 14, 23.5; sunflower 24, 15.5; corn 20, 23.5; soybean 19, 21.2. The titer was higher than the Bellier index except for peanut and sunflower oils. Lea Da Silveria. Industria y quim 4, No. 3, 70-3; through Chem. Abs.

Solvent Recovery

Apparatus is devised such that propane which has been used to extract oil from cottonseeds, is later withdrawn in vapor form, the oil being left in liquid form for separate drawing off. Henry Rosenthal. U. S. Patent No. 2,290,209.

Committee D-12 Cancels Meeting

Committee D-12 of the American Society for Testing Materials, which has been functioning over a period of several years on the task of drafting specifications for soaps and detergents, has announced that the usual Spring meeting will not be held this year. Chairman Trevithick of the committee has requested that chairmen of sub-committees and sections send him any data that they feel should be included in the annual report of the committee to the ASTM. B. S. Van Zile of Colgate-Palmolive-Peet Co., secretary of Committee D-12, advises that the Society has just published "A.S. T.M. Standards on Soaps and Other Detergents," a 128-page booklet summarizing the work of Committee D-12 since its organization in 1936. Copies are available at \$1.35 each through the American Society for Testing Materials, 260 S. Broad St., Philadelphia. The following specifications and methods of test are included in the booklet:

Specifications

Soaps
Bar Soap, Ordinary (D 497)
Chip Soap (D 496)

Chip Soap, Compound with Rosin (D 690)
Chip Soap, Olive Oil (Type A, Pure; Type B, Blended) (D 630)
Chip Soap, Palm Oil (Type A, Pure; Type B, Blended) (D 536)
Powder Soap, Alkaline (D 534)
Powdered Soap, Built (D 533)
Powdered Soap, Compound, Granulated with Rosin (D 691)
Powdered Soap, (Nonalkaline Soap Powder) (D 498)
Salt Water Soap (D 593)
Solid Soap, Olive Oil (Type A, Pure; Type B, Blended) (D 592)
Solid Soap, Palm Oil (Type A, Pure; Type B, Blended) (D 535)
Toilet Soap, Milled (D 455)
Toilet Soap, White Floating (D 499)

Detergents

Soda Ash (D 458)
Soda, Caustic (D 456)
Soda, Modified (Sesquicarbonate
Type) (D 457)
Sodium Metasilicate (D 537)
Sodium Sesquisilicate (D 594)
Trisodium Phosphate (D 538)
Tetrasodium Pyrophosphate (Anhydrous) (D 595)

Methods of Test

Soaps and Detergents
Sampling and Chemical Analysis of:
Soaps and Soap Products (D 460)
Special Detergents (D 501)
Sulfonated and Sulfated Oils (D 500)
Metal Cleaning Compositions, Industrial (Proposed Draft)
Test for:
Soaps and Other Detergents, Particle Size (D 502)
Definitions:
Soaps and Other Detergents, Terms Relating to (D 459)

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Fix Alkali Shipping Zones

AUSTIC soda was the first material singled out by the WPB for shipment by the zone plan under terms of General Transport Order T-1, issued January 30, to take effect April 1. This first move, in what is expected to be a series of steps to control all shipping, prohibits tank car and tank truck shipments of caustic soda across the boundary lines of the 13 zones which have been established in the United States. Specific authorization to cross zone boundary lines must be granted by the WPB. Roughly the zones are as follows: (Zone 1.) The New England states and those counties in central northwestern New York state; (Zone 2.) Metropolitan New York City, including southern Connecticut and central New York counties and the northeastern metropolitan area of New Jersey; (Zone 3.) The western tip of New York state south including the northeastern counties of Pennsylvania and

the northwestern counties of New Jersey, excluding the metropolitan area; (Zone 4.) Southern New Jersey, Delaware, Maryland, the District of Columbia, the counties in the northeastern half of West Virginia, that part of Pennsylvania not included in Zone 3, which is the western section of the state, the northern half of Virginia from the James River and north of and including the counties of Albemarle and Rockingham, the city of South Richmond, Virginia, and the eastern third and entire lower southern section of Ohio; (Zone 5.) The city of Nitro, West Virginia. Authorizations for shipments into this zone from 4 and 8 will be issued by the Director General of Operation; (Zone 6.) That part of Ohio not included in Zone 4 (which means western and northern Ohio), the states of Michigan, Indiana, Illinois, Wisconsin, Minnesota, Iowa, Nebraska, North Dakota and South Dakota, Kan-

sas City in Missouri and Kansas, and the city of St. Louis, Mo.; (Zone 7.) The city of Memphis, Tennessee. Authorization will come from the Director General of Operations for shipments into this zone from 6, 8, and 11. (Zone 8.) The southern parts of Virginia and West Virginia not included in zone 4, also excluding South Richmond, Virginia and Nitro, West Virginia, the states of Kentucky, North Carolina, South Carolina, and Tennessee, excluding the cities of Memphis, Chattanooga and Nashville, and the extreme northern section of Georgia; (Zone 9.) Chattanooga, Tennessee. Authorizations by the Director General of Operations will be forthcoming for shipments into this zone from zones 8 and 10; (Zone 10.) The states of Florida, Mississippi, Alabama and Louisiana, and that part of Georgia not included in Zone 8, which is the central and southern section of the state; (Zone 11.) The city of Nashville, Tennessee, and the states of Texas, Oklahoma, Arkansas, Missouri and Kansas, excepting the cities of St. Louis and Kansas City; (Zone 12.) The states of Montana, Idaho,

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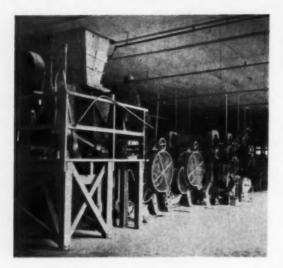
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NEW JERSEY

Wyoming, Utah, Colorado, Arizona, New Mexico, and the eastern half of the state of Nevada; (Zone 13). Washington, Oregon, California and the western half of Nevada.

Besides "Zoned Shipments" under List 1 of the order, there are two other lists: List 2 (Reported Shipments) on which reports are to be made of materials to be shipped on the 20th day of the month preceding the one in which shipment is to be made; List 3 (Other Shipments) containing the list of products that may be shipped in tank cars. It becomes effective March 1, as does List 2. Materials on List 3, including, in addition to caustic soda, babassu oil, caustic potash, coconut oil, cresylic acid, fatty acids and their esters, glycerine, oil foots or sediments, oleic acid, palm oil, rosin oil, linseed oil, soap stock, stearin, sulphuric

acid, tall oil, tallow, etc., may be shipped without restriction, except that such shipments are controlled shipments of List 1 or 2.

Exceptions to List 3 apply to materials consigned to or for the account of the Army, Navy, Maritime Commission, or War Shipping Administration, or corresponding Canadian agencies specified in Priorities Regulation No. 14; or unless the material shipped is procured pursuant to the Lend-Lease Act.

Another move in the transportation field to conserve shipping space was the recent issuance of Transportation Request No. 1. TR-1 permits producers, shippers or distributors of the 38 fats, oils and chemicals listed therein to make common use of tank cars without being in violation of antitrust laws.

The Case for Abrasive Soaps (From Page 29)

The majority of better quality hand soaps on the market, especially the branded and advertised products, never went after the cheaper market. Some of them used the wrong type of abrasives, it is true, but not too much with the view of cheapening their products. But the low-grade peddled type of hand soap caused the real trouble with mechanics' hands and gave the entire class of products a bad name, particularly among the medical profession as the country became more and more dermatitis-conscious. Quite evidently the doctors did not go too thoroughly into the character or type of the abrasives used. Just like in other products which medical men have upon occasion condemned, they did not differentiate,and to them a hand soap was a hand soap irrespective of its composition and all hand soaps were bad for the hands. That the trend in the better soaps has been away from sharp sand and other cutting abrasives for some years, they do not know. That many carefully tested products based on softer non-cutting abrasives have come to market, they also do not know.

In the light of developments of the past few years, especially since the beginning of the war, and of the

wider investigations in the matter of industrial dermatitis, hand soap manufacturers, whether their products be powders or pastes, have not ignored the trend. The war has kept some of the lower-grade products going, but the tendency in most properlymade hand soaps has been to get away from the strong, highly abrasive types by the use of a better grade soap base and a more suitable abrasive such as pumice. That the blanket criticism of the quality of hand soaps which was current a few years back and upon which adverse medical opinion was based will in the future be unwarranted is likely. The cheap, skin-damaging products will be forced off the market by the new trend.

Temperature Indicators

Observation of surface temperatures with Tempilstiks requires no more equipment than is needed to draw a line with a piece of chalk. The sticks made by the Fisher Scientific Company, look like colored crayons but are made of materials which melt at specific temperatures. A mark made with such a stick melts and becomes shiny in appearance when its melting point is reached. The new devices are available in the range of 125° F. to 700° F., and have an accuracy within 1 per cent

of the stated melting point. Surface temperatures of machinery and motors are readily measured; bearings and insulation can be protected by this simple method. *The Laboratory* 13, No. 4, 86-7 (1943).

Unsaturated Acids

A spectroscopic method permits direct determination of the linoleic and linolenic acid content of a fat. These acids can be determined simply and as accurately as standard values for the pure acids can be obtained, when the fats do not contain other acids with two or more double bonds. Making use of the iodine number, the oleic acid content can be obtained. The saturated acids are then obtained by difference. An analysis can be made on fats containing chiefly saturated acids, oleic, linoleic, and linolenic acids with as little as 0.2 gram of sample. The method is more rapid than the Kaufmann method and involves fewer determinations. J. H. Mitchell, Jr., H. R. Kraybill and F. P. Zscheile. Ind. Eng. Chem., Anal. Ed. 15, 1-3 (1943).

Metal Polish

Metal polish may be made from the following:

									1	Parts
Powdered	soap									3
Hot water										
Distilled of										
Ammonia,	10% .									3
Denatured	alcoh	10	1		*			×		16
Tripoli				×			*	*		20

The soap is dissolved in the hot water, and the olein, ammonia and alcohol are stirred into the soap solution. The abrasive is stirred in after the liquid is homogeneous. Assoc. Am. Soap & Glycerine Products Bull. Jan., 1943.

Auto Polish

A preparation suitable for polishing automobile bodies is an oil-inwater emulsion containing a petroleum distillate as the dispersed phase. Also present is a condensation product of castor oil or croton oil and phenol, cresol or phthalic anhydride. The condensation product is insoluble in water and insoluble in the petroleum distillate but dispersed in the latter. Joseph A. Tumbler. U. S. Patent No. 2,289,392.

10 YEARS AGO



CAMAY APPEARED IN A NEW WRAPPER AS A 54 SELLER -FIRST NATIONALLY ADVERTISED SOAP TO USE OUTER CELLOPHANE WRAP



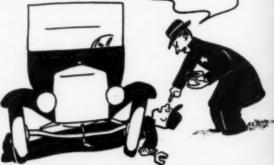
INTO THE SENATE WASTEBASKET WENT THE PROPOSED DUTY OF 5 + PER LB. ON ALL IMPORTED OILS AND FATS - SENATE COMMITTEE KILLED IT



I'M TAKIN' YOU TO HEADQUARTERS FOR TAX EVASION ON THIS TOILET SOAP



SOAP EMPLOYMENT DROPPED 15% DURING 1932



COMMISSIONER OF INTERNAL REVENUE RULED THAT MECHANICS' HAND SOAP WAS TAXABLE AT 5% AS TOILET SOAP UNDER THE '32 REVENUE ACT

HOMER BANTA, HEAD OF IOWA SOAP CO., BURLINGTON, STATED 1932 WAS LARGEST YEAR IN FIRM'S HISTORY, PROD-UCTION EXCEEDED 1200 CARLOADS OF SOAP



BANK HOLIDAY DECLARED BY NEWLY INAUGURATED PRES. ROOSEVELT -BUSINESS HIT ABSOLUTE BOTTOM AND THE NEW DEAL STARTED ON ITS DIZZY COURSE

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BY ED TE EW

1943



I.S.I. CHEMICAL N

U.S.I. Establishes **New Department for Technical Problems**

Will Aid Customers, Explore Potentialities of Products

A Technical Sales Development Department has been established by U.S.I. for the joint purpose of furnishing customers with a technical field service that can aid them in solution of their problems and of providing the means for a more intensive exploration of both new and old products. The headquarters of the department have been located in a newly constructed laboratory building.

Dr. D. G. Zink will act as director of the new department, A. J. Fisher, Jr., as assistant director, and Norman C. Schultze as chief

Specifically, the proposed work of the de-partment has been outlined as follows:

I. Investigation of suggestions for new products and their application.
 Development of new uses of existing

3. Furnishing technical field service, including the handling of customers' problems. Study of industrial trends.

The activities of this department will be ontrolled by a committee comprising Dr. F. J. Metzger, Director of Research; W. O. Griffen, General Production Manager; L. A. Keane, General Sales Manager; Dr. Zink and Glenn Haskell, president of U.S.I., who will act as chairman.

Agar Easily Recovered From Culture Media

A simple procedure for recovering agar culture media was described recently which was said to provide as satisfactory an agar as the fresh commercial product.

The used media is autoclaved for steriliza-tion purposes and filtered through cheese-cloth to remove coagulated proteins. It is then poured into trays from the freezing compart-ment of a refrigerator and allowed to cool. The trays are returned to the freezing com-partment and left overnight. The following morning, the frozen material is rapidly melted in warm alcohol. The aqueous alcohol, con-taining the particles of agar, is filtered with cheese-cloth and the agar thus collected washed repeatedly with distilled water. Dehydration of the agar is produced by washing

Acetoacetanilide Used in **Making Synthetic Resins**

PITTSFIELD, Mass. Acetoacetanilide, widely used as an intermediate in the produc tion of yellow pigment dyestuffs, has potential utility also in the manufacture of synthetic resins for plastics and coatings.

This fact is revealed in a recent patent granted to an inventor here. In general, the new resins are prepared as condensation products of acetoacetanilide and an aldehyde. Modifying reactants may be included, such as urea, acetamide, or melamine, it is claimed. Acetoacetonilide is produced by U.S.I.

Glycerol by Fermentation Made Practicable by U.S.I. Research

Commercial Exploitation of New Procedure Will Provide Additional Supply Sources for This Vitally Needed Material

The wide industrial utility of glycerol, as outlined in the first article on this series in the February issue of U.S.I. CHEMICAL NEWS, coupled with the heavy demand for this material in the manufacture of explosives, serves to indicate the urgent need for a source supplementary to the principal one, which is the saponi-

G. L. Haskell Is Elected To Presidency of U.S.I.

NEW YORK, N. Y. — Glenn L. Haskell, first vice-president and director of the company



Vice-president in charge of sales since 1927, Mr. Haskell joined Glenn L. Haskell U.S.I. in 1921, holding successively the posts

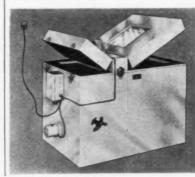
of Western sales manager at Chicago and general sales manager at New York. He was born in Chicago in 1883 and began his busis career in 1900 with the American Dis-

Portable "DRY-ICE" Cabinet **Developed for Refrigeration**

SILVER SPRINGS, Md. — A constant temperature "DRY-ICE"* cabinet has been developed for use where expensive mechanical refrigeration would not be justified, which is said to provide temperatures from minus 90° F. to 220° F. with a constancy of plus or minus

The cabinet is described as portable and ready for operation after packing with "payrec" and plugging the cord into the current supply. In addition to the type described, a low-temperature model is available with a range from zero to minus 90° F.

* Pure Carbonic, Incorporated, sells "DRY-ICE" manufactured by U.S.I.



fication of natural oils and fats. Other than the production of glycerol by saponification of fats or by chemical synthesis, the most promising source is fermentation. Use of "Steering Agents"

With respect to this, it has been known for many years that the normal fermentation of by yeast results in the formation of glycerol to the extent of about 3% of the sugar along with the ethanol which is the main product of the fermentative activity. In recent years it has been found possible to modify the fermentation in various ways so as to increase the relative amount of glycerol. The modifying substances added have been appropriately called "steering agents," and it a comparatively simple matter to increase the glycerol some five or six fold by adding suitable chemicals to the fermentation. The activities of the yeast may also be steered in the direction of glycerol formation by certain purely physical modifications in the fermenta-tion solution. This knowledge was utilized by the Germans during World War I to manufacture considerable amounts of glycerol by fer-mentation for use in explosives.

Practical Difficulties The problem of producing fermentation glycerol has been studied for some years by the Research Staff of U.S. Industrial Chem icals, Inc. This study has been designed to find means of obtaining glycerol from molasses fermeans of obtaining glycerol from molasses fer-mentation, since molasses is the principal commercially practical source of the sugar necessary for the process. However, when molasses is used with appropriate steering agents, the recovery of the glycerol produced becomes difficult, because of the fact that after (Continued on next page)

Greater Power, No Corrosion Claimed for New Antiseptic

DANBURY, Conn. — A patent for an anti-septic for the sterilization of surgical instruments at room temperature, which is claimed to be non-corrosive in action and several times stronger in germicidal value than formaldehyde compositions previously utilized, has been assigned to a company here. It can be used either as a liquid or as a vapor.

The composition is a strong solution of formaldehyde in combination with a relatively large amount of ethyl alcohol, a small quantity of methyl alcohol and a very small quantity of a compound containing a reducing anion. A small quantity of an alkalizing agent may also be included.

A typical formula for this antiseptic follows:

U.S.I. CHEMICAL NEWS

New Glycerol Process

(Continued from preceding page)

removal of alcohol by standard distillation procedures, the glycerol has to be separated from stillage containing a relatively large amount of solids other than glycerol. These solids are made up of an assortment of chemical entities of widely differing nature derived from the cane juices and are not easily separated from the glycerol.

U.S.I. Procedure

U.S. Industrial Chemicals, Inc., has developed through the pilot plant stage a process for the manufacture of glycerol from molasses. A modification of the fermentation procedure has been worked out that considerably increases the amount of glycerol formed.

In addition, U.S.I. has a proven process for the recovery of the glycerol from the other sugar solids—and for the final purification to produce dynamite or C.P. glycerol. At the present time, however, the critical materials required for such a project are needed more urgently for other purposes. It is obvious that when they are available, the commercial operation of a process for turning out glycerol from a source other than fats would remove the danger of a shortage by making possible rapid expansion of production of the fermentation glycerol to meet necessary war and civilian demands. Fermentation glycerol is our insurance against shortage of nitroglycerine for explosives.

Describes Preparation Of Multitone Coatings

BROOKLYN, N. Y.—The phenomenon of "blushing" in lacquers—usually a condition be avoided—can be turned to advantage in the production of multitone coatings, it is claimed by an inventor here.

According to the patent issued on the process, a coating composition that will produce a blushed film is prepared and applied to a surface. If the film is treated with an embossing roller, a partially clear film is produced at some points, while the original blush remains elsewhere, thus resulting in the multitoned effect.

The coating may consist of:

ALCOHOLS

												1	P	a	ri	18	by weig
																	13.8
Acetone			*		*					è	*	*		a			_5.0
Methanol (C.P.)		*	*	8		*	*		*	9.			9.	×			74.4
Water								*									4.2
Glycerol																	2.6

New Federal Specification Issued for Lacquer Thinner

WASHINGTON, D. C.—A new federal specification on lacquer thinner (E-TT-T-266) has been issued to allow the use of aliphatic hydrocarbons instead of coal tar and aromatic petroleum hydrocarbons. In order to make this possible, the ester content has been changed from 25-35% to 30-40%, the coal tar and petroleum hydrocarbons, 40-50% to petroleum hydrocarbons 30-40%.

A suggested formulation is butyl acetate 26, ethyl acetate 8, methyl ethyl ketone 15, butanol 12.5, petroleum naphtha 38.5.

Ethanol Said to Improve Dehydrated Castor Oil

CHICAGO, Ill. — The treatment of heat bodied dehydrated castor oil with low boiling alcohols, preferably ethanol, will substantially reduce the acid and acetyl value of such oils and make them suitable for highly water-resisting varnishes, an inventor here claims.

sisting varnishes, an inventor here claims.

The smallest ratio of ethanol to oil that was found desirable from a practical standpoint was four volumes of ethanol to one of oil. According to the inventor, the only upper limit of ethanol is that dictated by considerations of cost and of the capacity of the handling equipment.

Improved Method Developed To Clean Slides, Coverslips

NEW YORK, N. Y.—A new method for cleaning glass slides and coverslips has been developed here which is claimed to give excellent results, it was reported recently in "The Chemist-Analyst."

The steps to be followed are: soak the used slides and coverslips in xylol for several days; rinse with 95% alcohol for a few minutes; rinse for a few seconds with acidified alcohol (1% HCl in 70% alcohol); and soak in 95% alcohol again; and wipe dry with a clean cloth.

Alkalis in Glass Determined With Denatured Alcohols

HARTFORD, Conn.—Tests conducted here recently show that alcohol denatured with 10% ether (formula SD13A) and alcohol denatured with 10% acctone (formula SD23A) are satisfactory substitutes for 95% alcohol in the determination of sodium and potassium in glass.

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

Protective clothing has been designed to supplement the use of creams and liquids in operations where the exposed skin is subject to abrasive action or where the protection of clothing is of prime importance, it is said. (No. 670)

A new erganic alkyl peravide, t-butyl hydroperoxide, is available commercially which is reported to be suitable for use as a catalytic agent in one or two phase polymerizations, an oxidation agent, a drying accelerator, a combustion accelerator and a bleaching agent. (No. 67)

accelerator and a bleaching agent. (No. 67)

An ecid siphen has been developed for dispensing corrosive liquids from carboys and drums. Made of a semi-flexible plastic impervious to ordinarly commercial acids and alkalis, the siphon is said to produce a clean, easily controlled flow.

A substitute for carnauba wax in no-rub polishes is offered which the maker says can be used in amounts as high as 80% while still retaining gloss and other necessary properties in the polish. Available in quantities without priorities, the product is described as a processed type requiring no further processing.

(No. 673)

Surface active agants have been developed which are described as non-electrolytes, which are neither sulfates nor sulfanated products and are essentially free from soap, excess fatty acids and inorganic salts.

USI (Ne. 674)

A synthetic beeswax is now being produced which is claimed to be uniform in quality and to have all the characteristics of the genuine product. Available without priorities, it is said to be an excellent emulsifier and to be free from harmful ingredients.

USI

No. 673

Five skin-protective creams are said to be useful for protection against dust, sticky compounds, irritants with low water content, strong and dilute acids and alkalis, coolants with more than 10% water, ultra-violet and infra-red rays, and as for general skin conditioning.

US1

(No. 676)

A plastic molding material of unusual impact strength is said to have been developed through the use of a fibre filler which provides uniform load distribution. Impact breaking strength is rated at 3.2 to 4 ft. lb.; tensile strength at 6,000 to 7,000 lb. per. sq. in.; and flexural strength at 12,000 to 13,000 pounds.

Lacquers for spray application on wood, metal, plaster, plastic and composition surfaces are offered which are claimed to produce a finish that resembles metal plating.

U.S. I.

A static charge mater has been put on the market for testing the resistance of a worker to ground in plants where there is danger of explosion due to static sparks. It consists of a resistance mater with its scale shaded to show safe and unsafe zones, a floor plate on which the worker stands, and connecting leads between the plate and the meter.

U.S. NDUSTRIAL CHEMICALS, INC. 60 EAST 42ND STREET, NEW YORK NOSTERN US ANTI- SERVE IS FRANCHES IN ALL PRINCIPAL CITIES IN NOSTERN US ANTI- SERVE IS FRANCHES IN ALL PRINCIPAL CITIES

Amyl Alcohol
Butanol (Nermal Butyl Alcohol)
Fusel Oil—Refined

Ethanol (Ethyl Alcohol)
Specially Denatured— All regular,
and anhydrous formulas
Completely Denatured—all regular
and anhydrous formulas
Pure—190 proof, C.P. 96%,
Absolute

Completely Denatured—ail, and anhydrous formulas Pure—190 proof, C.P. 96%, Absolute U.S.I. Denatured Alcohol Anti-freeze Solox Proprietary Solvent Solox D-I De-icing Fluid

Ansol M Ansol PR ACETIC ESTERS Amyl Acetate

OXALIC ESTERS
Butyl Oxalate
Ethyl Oxalate

PHTHALIC ESTERS
Amyl Phthalate
Butyl Phthalate
Ethyl Phthalate

OTHER ESTERS

INTERMEDIATES

Diatol Ethyl Carbonate Ethyl Chloroformate Ethyl Formate

Acetoacetanilide Acetoacet-ortho-anisidide Acetoacet-ortho-chloranilid Acetoacet-ortho-toluidide Acetoacet-para-chloranilid

Ethyl Benzöylacetate Ethyl Sodium Oxalacetat Registered Trade Mark ETHERS

Ethyl Ether Ethyl Ether Absolute—A.C.S.

OTHER PRODUCTS

Collodians
Curbay B-G
Curbay Binders
Curbay X (Pawder)
Ethylene
Ethylene Glycol

Indalone Nitrocellulose Solution Potosh, Agricultural Urettan





PRODUCTS

Organic Sulfonate Detergents

To produce emulsifying and detergent products, a mixture of the sodium salts of the sulfonates of coconut-oil fatty alcohols is treated with sodium sulfite in a substantially anhydrous molten soap of a fatty acid, at a temperature above the melting point of the resulting mixture, while agitating the mixture. John Ross, to Colgate-Palmolive-Peet Co. U. S. Patent No. 2,289,044.

Bottle Washing

A composition for use with automatic washing machinery employing hot detergent solutions in connection with hard water consists essentially of a predominant proportion of a caustic alkali, a relatively small proportion of an alkali metal pyrophosphate and an alkali metal orthophosphate, the amount of the caustic alkali being at least 70 per cent of the whole. The ratio of pyrophosphate P2O5 to one part of orthophosphate P2O5 is 3-12 parts by weight. With the use of this mixture scale formation on the automatic washing machinery is substantially prevented. Harry H. Hull and Joseph Janota, Jr. to the Diversey Corp. U.S. Patent No. 2,289,578.

Soap from Petroleum

Petroleum wax is subjected to limited catalytic oxidation in the liquid phase to produce a crude oxidation product containing fatty acids. These are neutralized to produce an aqueous solution having a soap content of about 20-40 per cent. Unsaponified and unsaponifiable matter is separated from the aqueous solution, after which the solution of crude soaps is heated to 275-325° C., then further subjected to flash vaporization to vaporize 25-75 per cent of water together with impurities. The resulting vapors are withdrawn. The vaporization residue is recovered as a

concentrated aqueous solution of purified soaps. Louis E. Pirkle, to Jasco, Inc. U. S. Pat. No. 2,287,128.

Quaternary Detergents

Tertiary aminomethyl ethers are prepared and treated with alkylating agents to form quaternary compounds having one hydroxymethyl group, or with aliphatic hydroxymethyl halides to form quaternary ammonium salts which may be used as emulsifying and detergent agents, particularly in acid solution. Louis H. Bock, to Rohm & Haas Co. U. S. Patent No. 2,287,464.

Sudsing Agent and Detergent

Sudsing and detergent compounds are obtained by the condensation of such compounds as a sodium coconut-oil soap with sodium chlorohydrinsulfonate in the presence of acetamide. N. B. Tucker, to the Procter & Gamble Co. U. S. Patent No. 2,289,-391.

Synthetic Detergents

In order to render them suitable for washing cotton goods as well as for silk or woolens, non-soap detergents of the Igepon or Gardinol type, which normally contain a large proportion of salts such as sodium sulfate, are substantially desalted by extracting the active detergent agent with alcohol and recovering it by evaporation of the solvent. The recovered detergent is blended with alkali pyro- or polyphosphates. Lever Bros. & Unilever, Ltd. R. Thomas, and C. B. Brown. British Patent No. 547,688.

Free-flowing Powdered Soap

A free-flowing, non-dusting soap-powder product is produced containing 10-25 per cent of moisture and having a bulk density of 0.25-0.40 as compared with water. It is composed predominantly of particles easily visible

to the naked eye. These particles result from the explosion of larger particles and are of featherlike, irregular shape. They have a surface and a uniform solid interior of about equal hardness and moisture content, and a uniform composition throughout any cross section. When placed in distilled water at 110° F. in the proportion of 0.75 gram of the soap product to 0.5 liter of water and stirred at the rate of 25 double strokes per 15 seconds, it dissolves completely. Victor Mills, to the Procter & Gamble Co. U. S. Patent No. 2,287,698.

Soap in Rubber Cements

Rubber cements, used in large quantities in the manufacture of leather apparel and other articles, are often made from aqueous rubber dispersions stabilized by soap. Such dispersions, which may be made from reclaimed rubber, are applicable to wet surfaces and penetrate deeply into the fibrous materials being cemented. The penetration is due to the surface tensionlowering of the soap present. A chloroprene emulsion, suggested as a cement, may be made from a chlorinated hydrocarbon emulsified in soap solution. It is first deodorized by extracting with a cheap hydrocarbon solvent and is then mixed with soap. Assoc. Am. Soap & Glycerine Producers Bull., Jan., 1943.

Acid Shampoo

An acid preparation for washing hair is formed containing sodium dodecyl-sulfate or similar compound and a weakly acid ingredient such as tartaric or citric acid. Ehrhart Franz. U. S. Patent No. 2,289,004.

Fat Determination

The use of benzine boiling at 60-70° C. as solvent simplifies fat determination by making it unnecessary to filter fat from the benzine solution. Because of the low density of the benzine the insoluble impurities settle to the bottom. This allows the clear supernatant liquid to be removed by pipetting. The technique is adaptable to fat determination in soap and in food materials. J. Grossfeld. Fette und Scifen 48, 355-9; through Chem. Abs.



... for the LARGEST Selling Lanolin in the U.S.A.

... for Lowest ODOR Volume and

... for Constant IMPROVEMENTS

3. BETTER COLOR QUALITY
4. SMOOTHER TEXTURE Resulting from Malmstrom Research

... for NIMCO Brand ... America's Largest Selling Lanolin

Smoother Texture

1. LOWEST ODOR VOLUME

2. GREATER UNIFORMITY

5. FINER BODY CONSISTENCY

America's No. 1 Choice Because It's

DEGRAS • Neutral and Common • Wool Greases

CHICAGO

KANSAS CITY

MINNEAPOLIS

LOS ANGELES

Say you saw it in SOAP!

March, 1943

M

PATENTS

Conducted by

Lancaster, Allwine & Rommel

Registered Attorneys
PATENT AND TRADE-MARK CAUSES

402 Bowen Building, Washington, D. C.

Complete copies of any patents or trade-mark registration reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine & Rommel. Any inquiries relating to Patent or Trade-Mark Law will also be freely answered by these attorneys.

No. 2,307,482, Insecticide, patented January 5, 1943 by Seaver A. Ballard, Berkeley, and Vernon E. Haury, El Cerrito, Calif., assignors to Shell Development Company, San Francisco, Calif. An insecticide comprising an unsaturated alicarbocyclic ketol having the carbonyl group in the ring and containing at least 10 carbon atoms.

No. 2,307,775, Pest Control, patented January 12, 1943 by Albert L. Flenner, Wilmington, and Avery H. Goddin, Newark, Del., assignors to E. I. du Pont de Nemours & Company, Wilmington, Del. A mothproofing composition containing as an essential active ingredient a tertiary amine having the formula



in which R1, R2 and R3 are lower alkyl groups.

No. 2,307,844, Insect Lure, patented January 12, 1943 by Miyauooto McPhail, Honolulu, Territory of Hawaii, dedicated to the free use of the People in the territory of the United States. A lure for the melonfly (Dacus cucurbitae) comprising as its essential active ingredient a soap chosen from the group consisting of linseed oil soap and corn oil soap.

No. 2,309,289, Process for Disinfecting Seeds, patented January 26,

1943 by Adolf Zade, Stockholm, Sweden. In the disinfection of seeds, the process which comprises contacting seeds to be disinfected with a fungicidal organic mercury compound dissolved in an oily vehicle in a concentration amounting to not substantially less than about 0.5 per cent by weight, the quantity of solution employed being sufficient to cause a thin film to spread over the seeds but not substantially more than about 10 grams of solution per kologram of seeds, whereby the production of sticking between the seeds is prevented and the germinating power of the seeds remains substantially unimpaired.

Heard in Washington

(From Page 31)

tomers, who in turn must usually obtain similar information from their own customers. A number of chemical orders require applicants, on form PD-600, to obtain certificates from their customers so that they may have accurate information on which to rely. Other orders, which do not have the certification provision, nonetheless require an applicant to discover and certify to the Division the uses to which his product is to be put.

"Where an allocated chemical is required to make another product which is also under allocation, it is sufficient in applying for the first product merely to indicate the WPB order number governing the second product as adequate end use information. The applicants for the second product will be better able to indicate the ultimate use.

"It is realized that in many cases the transmission of end use information by a customer to his supplier goes against long established commercial customs. Nevertheless, in view of the shortages of many critical chemicals and the necessity in time of war that these chemicals be used solely for the most essential purposes, it is unavoidable that this information be ob-

tained by each supplier from his cus- specifications.

tomer. The only alternative would be for each customer, in each layer of industrial processing of each product, to transmit the information direct to the Division, a procedure which would involve an immense amount of paper work for all concerned and would require bureaucratic control beyond all reason."

In the field of price control, OPA is working out dollar and cents ceiling prices for soap and soap products, and at the same time has issued an order setting up the method by which manufacturers of agricultural insecticides and fungicides may establish the price of new products that cannot be arrived at under the General Maximum Price Regulation. The formula applies except at the retail level. The major points of the formula follow:

1. He shall select a comparable agricultural insecticide or fungicide. A "comparable insecticide or fungicide" is one which is manufactured by the same process and which is also most like the product being priced in kind and cost of ingredients, and for which a maximum price has been established;

2. He shall compute the difference between the delivered cost of the ingredients used in the manufacture of the comparable product and of the ingredients used in the manufacture of the product being priced;

3. He shall add or subtract, as the case may be, the difference computed in the preceding paragraph to or from his maximum price for the comparable product. The resulting figure shall be the maximum price for the product being priced.

"Filtrablend S" Oil Base

Petroleum Specialties, Inc., New York, have just introduced a new soluble oil base called "Filtrablend S." Because it contains no scarce ingredients, it is freely available without priorities. "Filtrablend S" can be blended with most neutral oils in the ration of one to six. Aqueous emulsions, made from such a cutting oil base, are stable, nonfoaming and meet Army and Navy specifications.



GOOD ... and that applies also to



Available in SOLID • FLAKE • GRANULAR BROKEN • WALNUT and • • • LIQUID 45%



SPOT Stocks at New York and our Branches.

HYDRATED 83-85%

LIQUID 47-48%

Likewise DOWNRIGHT GOOD and RELIABLE are:

ISCO WAXES

and top notch Substitutes

CANDELILLA Crude and Refined
CARNAUBA Substitute

BEESWAX Substitute JAPAN WAX Substitute OURICURY WAX—Single and Double Refined.

For Soapmaker's Chemicals, look to ISCO first.

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EQUIPMENT

IF YOU want additional information on any of the items described below or if you want any of the bulletins, catalogs, etc., write to the MacNair-Dorland Co., Inc., 254 West 31st St., New York, mentioning the number of the item.

930-New Soap Tissue Sheets

A new type of soap-impregnated paper sheets suitable for use in washrooms has been announced by Charles F. Hubbs & Co., New York paper firm. According to the company, the new soap tissue is made on a so-called wet strength cellulose base so that it does not disintegrate in use when wet and acts somewhat in the fashion of an individual wash cloth. The soap paper has the appearance of a regular toilet tissue and is arranged in packets with an interlocking fold so that it can be dispensed in washrooms and elsewhere from the regular type of toilet tissue holders. Further details are available from the company at 385 Lafayette Street, New York.

931-Soap in Road Building

The Association of American Soap & Glycerine Producers, in its January bulletin, cites tests conducted by the Michigan State Highway Department in the use of soap to make concrete pavements resistant to scaling, caused when calcium chloride and sodium chloride are employed to remove ice in Winter. Results of the tests, quoted by the Association from a report appearing in the December issue of "Public Safety," show that soap when mixed with sand is instrumental in producing a scale-resistant surface.

932-Discuss Odor Neutralization

The February, 1943, issue of The Givaudanian, house organ of Givaudan-Delawanna, Inc., New York, carries an interesting article on deodorizing problems under the title "The

Universal Deodorant is Still a Dream."
Referring critically to the overenthusiastic newspaper publicity attending the recent announcement of a
new deodorant, the article points out
very definitely that each odor is a problem in itself and that there cannot be a
single chemical or combination of
chemicals which will disarm all odors.

933—Review Insecticide Testing

D. F. Murphy reviews "The Testing of Insect Sprays" in the February issue of *The Robm & Haas Reporter*, house magazine of Rohm & Haas Co., Philadelphia, producers of Lethane. The early work of two Rohm & Haas men, Dr. Charles H. Peet and A. G. Grady, in the development of the Peet-Grady Method is discussed, and subsequent changes in the original technique are reviewed. Copies of the article are available.

934—Kalusoff Technical Bulletins

Kalusoff, Ltd., Springfield, Ill., recently issued two technical bulletins on their product Benchlophen, an active germicidal and fungicidal agent employed in the prevention and control of dermatitis and as a general disinfectant and fungicide.

935-List Essential Soap Jobs

The War Manpower Commission has recently issued a bulletin covering essential occupations in the chemical and allied products field for the guidance of local draft boards. This bulletin, Group 17, includes a number of essential occupations in the manufacture of soap and glycerine. Included on the list are the jobs of soap maker, soap foreman, glycerine refiner and a number of other occupational classifications. The fact that a particular classification is not on one of the official lists does not mean necessarily, it is pointed out, that the person so engaged cannot be deferred from military service for occupational reasons, if it can be shown that he is nevertheless a necessary man in an essential job. The standards applied by WMC in putting occupations on the essential lists are:

1. Does the occupation require a training period of at least six months before an untrained worker in the occupation can attain reasonable proficiency?

2. Is the occupation necessary to the performance of the particular activity (which in this case is the production of glycerine or a step necessary thereto)?

Premier Mill N. Y. Office

In connection with recent expansion of research, laboratory and production facilities, Premier Mill Corp., Geneva, N. Y., manufacturers of colloid mills, have opened a New York sales office at 110 E. 42nd Street. William H. Deerfield is in charge of the new office. According to a fourpage circular just issued by the firm, Premier Mills are now being used for the manufacture of such widely diversified products as cosmetics, insecticides and oil emulsions, organic chemical dispersions, polishes and waxes and many others.

Crown Can Names Two V.P.'s

W. I. Gladfelter, general manager of production and engineering, was made vice-president in charge of operations for Crown Can Company, Philadelphia, on February 4. Another Crown vice-president, F. Howard Braithwaite, in charge of general line sales, was on February 15, put in charge of all company sales. Mr. Braithwaite joined the Crown organization in 1936 as divisional sales manager for the parent company, Crown Cork & Seal Co., of Baltimore. Mr. Gladfelter, following associations with Bethlehem Steel Co., and Westinghouse Electric Mfg. Co., joined the Crown Cork & Seal Co. engineering staff in Baltimore. Here he designed the present modern type bottling machinery. Later, he was development engineer for Crown's seamless can. His new duties include complete direction of all company engineering and production operations.

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Soap X-ray Studies

The effects of solvents, of concentration, and of additives, on the x-ray diagrams of soap solutions give a more precise picture of the previous evidence for the formation of dissolved soap colloids. In the polyethylene oxide derivatives with hydrophobic end groups, a material is found which agrees extensively with the characteristic x-ray appearance of soaps. The x-ray results show that in soap solutions above the range of concentration of the micelles a lattice-like condition of the soap molecules exists.

The lattice formation is not identical with that of solid soaps, so that in this range of concentration no suspension of the smallest crystals of the solid soap exists. Between the formation of dissolved soap micelles and those of solid soap there exists an essential difference in that water adds between the sodium atoms in the direction of the length of the molecule. The soap micelles exist accordingly as layers of nonpolar double molecules, which unlike those of solid soap, do not touch, but are separated from one another by layers of added water.

With crystalline solid soaps and the lattice-like soap micelles in solution, only layers with a solid aggregation can be compared. The micelles perpendicular to the direction of the layers depend on the solvent for their arrangement. The soap micelles are comparable only in two directions with a solid material, and show a new behavior in the third direction. K. Hess, H. Kiessig and W. Philippoff. Fette und Seifen 48, 377-84; through Chem. Abs.

Acid Number Method

By making potentiometric titrations on alcoholic solutions of oleic acid, purified resin acids and distilled tall oil in the presence of alpha-naphtholphthalein and Nile blue as indicators, the suitability of the indicators for the determination of acid number of tall oil was investigated. Both indicators proved suitable but Nile blue could be used only if the solution contained less than 10 per cent of water, because the color

of this indicator in the range of the end point depends on its water content. When alpha-naphtholphthalein is used, the end point should be taken at a darkgreen color. Nile blue requires a shade between red and scarlet. Where greater accuracy is demanded, the potentiometric method should be used. G. Aulin-Erdtman. Swensk Papperstidn. 45, 333-5; through Chem. Abs.

Nature of Emulsions

Oil-in-water emulsions can be made with a minimum amount of emulsifier and a maximum particle size of the material being emulsified. These emulsions are called borderline emulsions. The difference between borderline and stable emulsions, as well as the difference between oil-in-water and water-in-oil emulsions, is shown in the building up of macroscopic films. Films of oil-in-water emulsions are traversed by a network or honeycomb of the nonvolatile portion of the aqueous phase. The oily film-forming material is held in these honeycombs.

In water-in-oil emulsions of the borderline type a heterogeneous film formation is not noticeable. The film appears no different from the pure oil. The presence of bound water cannot be determined by simple microscopic methods. Stable water-in-oil emulsions form spherical gels in the film. Anon. Fette und Seifen 48, 412-16; through Chem. Abs.

Fatty Acid Separation

When the liquid fatty acids obtained from the middle fractions distilled from bonito oil were stored after methylation in a sealed flask filled completely, no change was observed, but when left in a sealed flask half filled, the liquid separated into two distinct layers, light yellow and dark red, after a long period. The upper and lower layers were found to consist of slightly unsaturated and highly unsaturated fatty acids, respectively. In an open flask the whole liquid became highly colored and viscous. Storage in the sealed half-filled flask gives easy separation of the acids. Sei-iti Ueno and S. Matuda. J. Chem. Soc. Japan 61, 861-3; through Chem. Abs.

Washing Bottle Caps

Old crowns (caps) are collected by bottlers of carbonated beverages for recrimping, cleaning and sterilizing before re-use. Recommended practice has been to wash the crowns in hot alkaline solutions, rinse several times, then sterilize with chlorine solution and dry. This suggests that such work can easily be handled by commercial laundries. The Ford-Ideal Laundry in Kansas City has worked out a short washing formula using hot water, a colloidal alkaline detergent, and sodium hypochlorite, on netted crowns. Drying and further sterilizing in a hot tumbler completes the process. The method removes all lithographing and eliminates the necessity of sorting crowns. Tests on bottled beverages indicate no higher bacterial counts with reclaimed crowns than with new ones. Laundry & Dry Cleaning J. of Canada 22, No. 12, 17 (1942).

Sugar-cane Wax

Dried cane press cake extracted with carbon tetrachloride gave 13 per cent of a wax which was difficult to purify. The best results were obtained by boiling successively with aqueous sodium sulfate solution, hydrochloric acid, carbon tetrachloride, and activated carbon. The wax obtained had saponification value 81-135, iodine value 31.5, d 0.963-0.985, and melting point 68-78° C. It corresponds closely to beeswax but is somewhat harder than the latter. M. N. Rao and N. L. Vidyarthi. Indian Sugar 4, No. 10, 23-4 through Brit. Chem. Abs.

Fat Refining with Propane

To remove gummy materials from crude fatty material, the latter is mixed with a liquefied hydrocarbon which is gaseous at ordinary pressures, to dissolve the fatty material and precipitate gummy material. The latter is then separated from the fat. These steps are carried out under sufficient pressure to maintain the hydrocarbon, for example, propane, in liquid form. F. J. Ewing. U. S. Patent No. 2,288,-441.

Milk Soap

A stable jelly-like soap contains whole milk as a principal ingredient. The soap composition has the emollient value of whole milk, has detergent power, and at the same time acts as a skin softener by applying oils to the skin. The composition contains in an emulsified mixture at least 80 per cent of whole milk, an amine soap of a fatty acid, a fatty oil which may or may not be hydrogenated, and an alkylene glycol. The latter two ingredients are present in amounts less than that of the amine soap. The oil present has a relatively high melting point and a high saponification value in order to stabilize the product over a wide temperature range.

The method of making such a preparation is to heat the milk to about 140° F., add about 6 per cent of an amine soap and an alkylene glycol, and heat to about 170° F. while inhibiting the deposition of casein and scorching of the milk. The temperature of this mixture is then reduced to 150° F. Next is added about 10 per cent of a composition comprising an alkylol amine soap of a fatty acid and a hydrogenated vegetable oil. The amount of soap in the final mixture is greater than that of the remaining non-milk constituents. John E. McCormick. British Patent No. 548,382; through Perfumery & Essential Oil Record 33, 345 (1942).

British Medicated Soaps

The British authorities have exempted the following from the rationing provisions of the Soap Order from January 3, 1943 if supplied against a physician's prescription:—Official Pharmacopoeal soaps and medicated soaps containing not less than 1 per cent of mercuric iodide, 4 per cent of ichthyol, 2 per cent of salicylic acid, 2 per cent

Opera	t	ic)1	n									Wa	ter level
Break		*											5	inches
Suds	8												4	inches
Bleach	1												4	inches
Rinse													10	inches
Rinse														
Rinse													10	inches
Blue			*										10	inches
Sour			*										4	inches

of resorcin, or 5 per cent of sulfur. Chem. Trade J. & Chem. Engineer 112, 36 (1943).

Carbonate Determination

Alkali carbonate can be determined colorimetrically in the presence of bicarbonate by means of the red color produced by the former with para-nitrosothymol. This method is most accurate when only a little carbonate is present with much bicarbonate, the conditions under which the titration method is least exact. W. Taylor Sumerford, D. Dalton, and R. Johnson. Ind. Eng. Chem., Anal. Ed. 15, 38-9 (1943).

Shortened Wash Formula

The formula shown below is recommended as a short washing formula for lightly or moderately soiled white goods. Such a formula should assist in the war-time problem of getting out more work in less time.

Some slight change may have to be made in the soap-alkali ratio in order to obtain the desired alkalinity on the break and suds, and to attain the optimum, pH for bleaching in the third operation. These details must be worked out in the individual laundry as they depend on the type of supplies used and the type of work handled.

Increase in temperature in the first three operations tends to compensate for reduction in washing time. The third operation serves as a cleansing bath for removal of soil as well as being effective in the bleaching of many kinds of stains. The fourth rinse serves both as a rinse and as a blue bath. The formula is not intended for heavily soiled or stained garments, but is practical for most hotel linens and similar materials. J. Fred Oesterling and Warren Stubblebine. The Laundryman p. 12, Jan., 1943.

Temperature	Suds		Time
125-130°F.	Heavy	7	minutes
150°	Heavy	7	minutes
155°	Medium	10	minutes
160°		3	minutes
160°			minutes
130°		3	minutes
110°		5	minutes
100°		5	minutes

Tall Oil Soap

Tall oil is heated, while passing a strong current of steam through it, with an alkaline material to form soaps with the resin-like and fatty acids present. The rate of addition of alkali is such that the product is maintained in a fluid state; the amount of alkali added is sufficient for complete saponification of the acids. After saponification, the heating and passage of steam through is continued long enough to vaporize any liquid water and unsaponifiable material in the tall oil. The temperature is kept at about 200-350° C., and above the melting point of the soap. Unsaponifiable material is condensed and collected after separation from the soap. E. E. Dreger, to Colgate-Palmolive-Peet Co. Canadian Patent No. 410,221.

Hexa-alcohols Detergents

Two new series of detergents, emulsifiers and wetting agents have been announced by the Atlas Powder Company, Wilmington, Del. They are called the Spans and the Tweens. While related, each possesses a multiplicity of functional groups which permits a large number of modifications and combinations to meet special conditions. The chemical starting materials are the hexahydric alcohols, mannitol and sorbitol. Spans are long-chain, fatty-acid partial esters of hexitol anhydrides. Tweens are polyalkylene derivatives of hexitolanhydride, partial esters of fatty acids. Both types of products are nonelectrolytes and are nonsulfated.

Fatty Acids from Tall Oil

The fatty acids are separated from the resin acids in tall oil by converting the fatty acids into their alkyl esters, as by reaction with methanol, and converting the resin acids into their zinc salts by reaction with zinc oxide. These esters and zinc salts are then separated from each other by distillation. Resin acids may alternatively be converted into their aluminum salts by reaction with aluminum sulfate. F. H. Gayer and C. E. Fawkes, to Continental Research Corp. U. S. Patents 2,288,946 and 2,288,947.

Total 43 minutes

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DEODORANT L-37 MM&R

As many insecticide producers have discovered, to their complete satisfaction, these killers can be made acceptable in the best of society by the simple and inexpensive process of including Deodorant L-37 MMGR, a specific for neutralizing unwanted odors in fly spray formulae.

If you are now using Lethane, Lethane 384, Thanite, Velsicol or some other commonly used toxic agent, write us

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INSIDE NEWS

MARCH

PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y.

1943

Vegetable-Juice Blends May Become Important Post-War Food Items

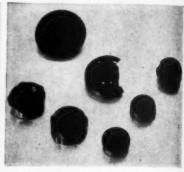
Problem Is To Increase Acidity In Order To Preserve High Vegetable Flavors

More varied packs of vegetable juices may find their way to retail shelves when wartime restrictions on containers are lifted, and blended juices probably will be used to a much greater extent. Experiments recently conducted in New York State show that the blended juices have advantages over unblended juices.

One of the chief difficulties in developing high-quality vegetable juices is that most vegetables are so lacking in acidity that they must be subjected to long periods of processing at high temperatures in order to destroy all bacterial life and thus lose their flavor and other desirable characteristics. If the acidity of the juice can be increased so as to prohibit the growth of certain heat-resistant bacteria, the product can be preserved by flash pasteurization that has proved so successful in preserving the high quality and flavor of fruit juices.

Rather than attempting to increase the acidity of vegetable juices by adding mineral acids, such as hydrochloric or phosphoric acids, or organic acids, such as lactic and citric acids, blending of the vegetable juice with juices of higher acidity, such as rhubarb or sauerkraut juices, is recommended. Of the two, sauerkraut juice has proved the more desirable because it does not mask the flavor of the juice with which it is blended.

Sauerkraut juice has been blended successfully with the juices of carrots, celery, rutabagas, beets, white turnips, onions, and red cabbage. Thus far, the carrot-sauerkraut blend is regarded as having the best flavor and appearance, although some of the sauerkraut-celery blends have also proved very palatable and attractive. In every instance the sauerkraut blends were deemed superior to the pure unacidified vegetable juice. (288)



Wartime closures made of bagasse, a semithermosetting type of plastic material

Bagasse Source of Plastic Material

A new molding compound made of bagasse, containing no critical chemicals, has been developed. It is a semi-thermosetting type of material, with a distinct leaning toward an impact technique of molding.

Restriction of essential chemicals used in the manufacture of the first line molding compounds prompted research on a substitute product made without any priority material. After considerable experimentation, a filler was developed from bagasse which, when used in combination with the bagasse resin, was found superior to wood-flour and other familiar types of filler. Finally, all chemicals were eliminated and a molding compound made of the bagasse alone. (292)

New Cleaning Agents

A new group of polyphosphates is compared with the commonly used alkaline detergents. The polyphosphates are excellent water softeners. They differ in their effects on different types of water and the right one must be selected for a particular hard water.

There is the possibility of utilizing the physical action of the organic detergents in cleaning instead of the chemical action of the alkalies. Combinations of alkaline and organic detergents may be fitted to particular jobs. It is said to be possible to soften protein films by the action of enzyme papaine, especially when the latter is supplemented with a wetting agent.

An acid can-washing solution is described which is more effective and more economical than the usual alkali solution. Similarly, suitable wetting agents may be combined with the polyphosphates in bottle-washing in give more brilliant bottles. (293)

Woodpulp Developed as Base for Smokeless Powder

Adaptation of woodpulp for the manufacture of smokeless powder has increased powder production by 25 per cent in American, Canadian and Australian munitions plants. The new process has freed Canada and Australia from dependence on cotton as a base for explosives, it is claimed.

The woodpulp development has been made available to the United Nations governments and all American producers. Developers of the process estimate that it will lower the cost of manufacture of smokeless powder in the United States by \$20,000,000 in 1943.

Substitute for Cork

Tests have been carried out in Jamaica with a view to using a locally grown plant as a substitute material for cork, according to recent trade reports. This new product has been developed from the roots of a swamp plant known in Jamaica as "cow apple". The botanical name of this plant, which is found in large quantities in the swampy areas around the island, is Annona palustris. Corks from this root have been made experimentally by one Jamaican firm. It is stated that they are not satisfactory for corking bottles of rum, but could probably be used for vinegar and similar liquid products. (290)

Phosphorescent paint applied to the walls of a darkened blackout room can provide enough glow to guide a person's movements. (291)

NATIONAL CAN

PLANTS: NEW YORK . BOSTON . BALTIMORE . CHICAGO . HAMILTON, OHIO . FORT WAYNE, INDIANA

New 5-Minute Test for Rubber

To facilitate the determination of the rubber content of 1,500 to 2,000 different species and varieties of plants in connection with a rubber research program, there has been developed a five-minute, microchemical test for the presence of rubber.

The test consists principally of the use of a dye dissolved in a mixture of solvents. The solvents penetrate the plant tissue and kill and preserve it for microscopical examination, and the dye stains the rubber and resins that are present. Additional treatments remove the stained resins and leave the rubber. Roots, stem and leaves of the plants are sectioned with a razor blade, tested, and the amount of rubber in the most promising plant samples is then determined accurately by quantitative chemical analysis.

Peacetime Equipment for Wartime Service



National Can facilities are available for speedy, efficient service on all types of permissible metal containers. (295)

Resins Improve Method of Softening Water

New resins are replacing old zeolite minerals and greensands for special uses requiring softened water of excellent quality, such as in breweries, canneries and beverage plants. Extended application of the resins to prevent spoilage of medicinal enzyme preparations, to purify drugs and to recover vitally needed metals from industrial wastes have been predicted for the future. (296)

No less than two hundred and eight distinet varieties of wheat are grown on farms in the United States. Of these varieties, 11 occupy more than 1,000,000 acres each.

Technical Topics

YUCCA HARVEST—Two West Coast companies are beginning to harvest Yucca from desert lands of Arizona as an emergency source of fibre. (298)

DRY FLAVORS—Flavoring extracts of most of the popular flavors have now been reduced to powder and tablet form. Armyinspired research to solve shipping breakage of the traditional liquid extract is responsible for the new development. (299)

GRAPE SUGAR FUEL—The motor bus service between Santiago and Valparaiso, Chile, is now running on a fuel mixture made largely from grape sugar residues, formerly almost entirely wasted. (300)

VITAMINIZED SOAP—A process for impregnating toilet soap with vitamin D in such a manner that the vitamin can be absorbed by the skin is said to have been developed by an Ohio firm. (301)

COFFEE CONSERVATION — Development of a process for sealing the flavor in coffee beans before roasting, so that coffee consumption may be reduced twenty-five per cent, has been recently reported. (302)

FOOD EQUIPMENT—Methods for comparing the efficiency of different methods of cleaning and sterilizing food processing equipment have been developed by the New York State Agricultural Experiment Station at Geneva, N. Y. (303)

CITRIC ACID SUBSTITUTE—The citric acid shortage has brought forth a new product which is described as suitable for use in nearly all items for which the acid has been a constituent part. One gallon of the product is said to be equivalent to 14 pounds of powdered citric acid. (304)

COD LIVER OIL OINTMENTS are just as effective as sulfa compounds in the treatment of wounds and burns, according to certain medical men. In some cases, results have been far superior to those obtained with the use of tannic acid. (305)

WHEAT GERM OIL—The addition of wheat germ oil to dried whole milk will prevent the rapid spoilage tendency under wartime shipping conditions, according to research workers. (306)

SYNTHETIC PUMICE — Soap bubbles, after being strengthened with liquid glue, are now mixed with cement. After hardening, this process produces a block similar to pumice stone which floats on water and has the heat-insulating qualities of cork. (307)

NEW TEXTILE FIBRE—The finest filament produced by man or nature is a new synthetic textile fibre with a diameter of one ten-thousandth of an inch. Twenty thousand miles of this fibre weighs only one pound.

CORK SUBSTITUTE — Washington and Oregon can produce 100 tons of bark of the Douglas fir tree, now being used experimentally, to relieve the cork shortage. The bark is ground, treated with water and ammonium hydroxide to give elasticity and then pressed into shape. (309)

PYRETHRUM TOXICITY TESTS— Pyrethrum extract testing to determine the relative toxicity of pyrethrins I and II was discussed in a recent British technical journal. Modifications of the current test methods were described involving the use of a potassium hydroxide solution to saponify the esters. (310)

PENCILLIUM—Puberulic acid has been found to be another metabolic product of the Pencillium species of molds which possesses high antibacterial properties. Pencillin had heretofore been shown to be a potent bactericide, even when highly diluted. Puberulic acid has been found to suppress the growth of a large number of Gram-positive bacteria at very high dilutions. (311)

VITAMIN A TEST—Vitamin A potency of oils, liquid foods, and drugs can now be determined mechanically by a new instrument which measures light absorption through a test sample at a wave length of approximately 328 millicrons. Operation of the instrument is based on the current output of a photocell, activated by a beam of light filtered to the characteristic absorption band of Vitamin A. A mercury vapor lamp acts as the light source. (312)

BOTANICAL DRUG CULTIVATION has been actively promoted in Australia during the past year, with the result that plants for the manufacture of hyoscine, hyoscyamine, and opium alkeloids were operated. Other products, the domestic production of which will be possible in coming seasons, are the digitalis glycosides, strychine, ephedrine, emetine, santonin and felix-mas, strophanthin and quabaine, and ergot. (313)

Every effort will be made to furnish additional information on these articles. Where such information is not obtainable, we will refer inquiries to the original source of the article. Write to National Can Corp., 110 E. 42nd Street, New York City, Please mention the number at end of article—also name of the magazine you saw it in.

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STIMTOX "A" (the low-cost fortified Pyrethrum powder has much greater killing power per unit of pyrethrins. Its killing power lasts longer, it adheres better and is more economical. For every pound of STIMTOX "A" you use—you save about four-tenths of a pound of 0.9% powder.

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March, 1943

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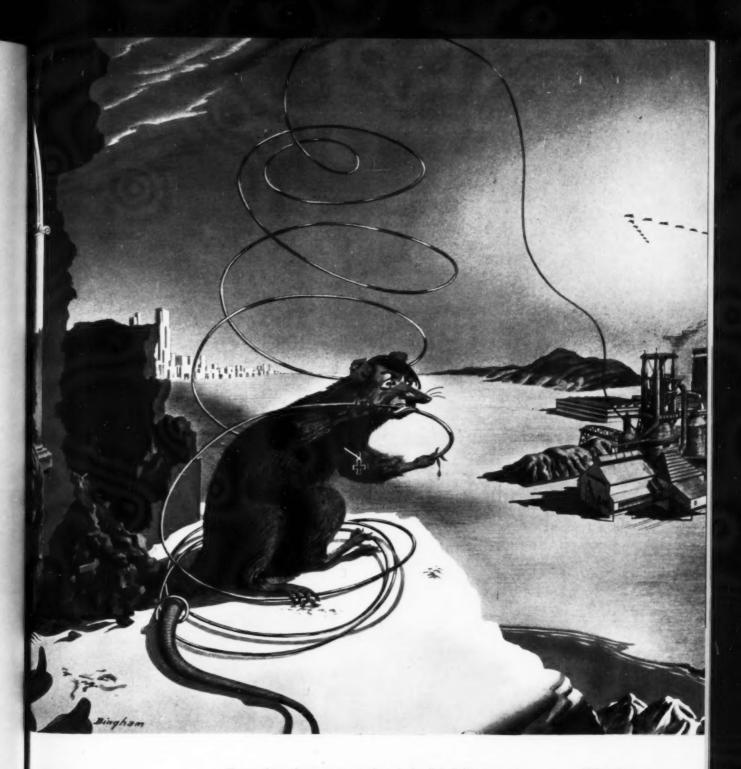
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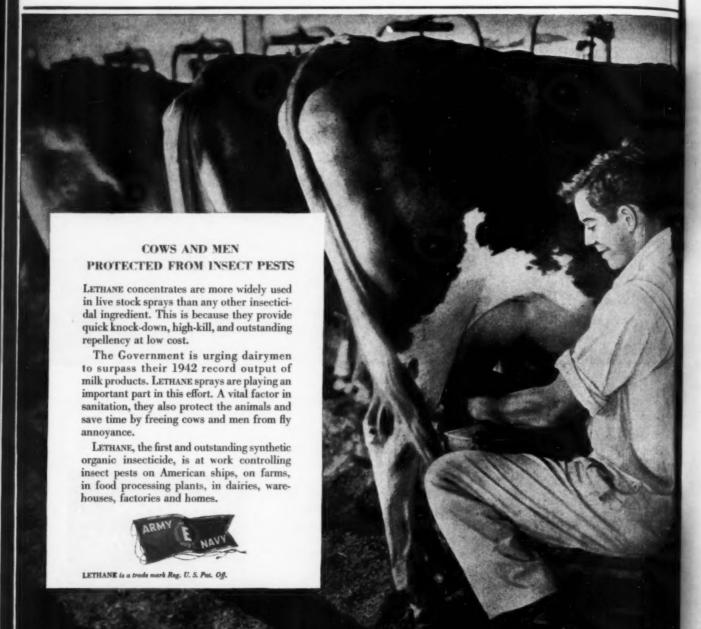
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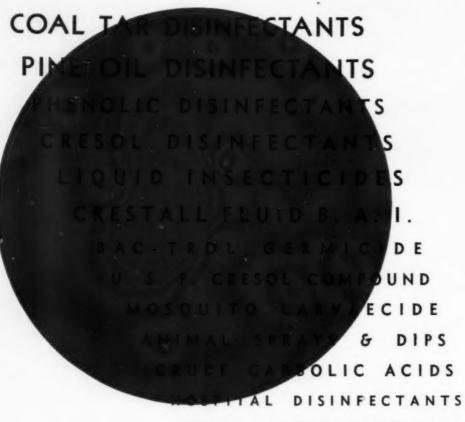
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Official Publication, Nat'l. Assn. of Insecticide & Disinfectant Manufacturers

IGHTER restrictions on the use of scarce pyrethrum will not come as a surprise to the insecticide and pest control industries. Estimates of the needs of our armed forces, lend-lease, and agriculture far exceed the rosiest hopes of total imports, That nobody will get all the pyrethrum desired is obvious, including the armed forces, and non-essential uses will get none. If the armed forces continue to insist on much higher concentrations of pyrethrum than are needed to do the job, they too will find themselves short of needed finished insecticides. Why cannot they, the same as others, accept substantiated expert opinion and in the interests of the war effort as a whole help to make available pyrethrum go further?



BECAUSE of the prospect that they would receive no pyrethrum over the balance of 1943, representatives of the pest control industry have filed strong protests in Washington, citing the important nature of much of their work in connection with war plants and also the greater number of fluoride poisoning cases of late. Manufacturers of household type insecticides have not been far behind likewise in their protests against complete shutting off of pyrethrum from products for essential industrial uses, particularly food protection.

The answer to these protests appears to be that WPB will try to allocate some limited amounts to these groups where the end-use is proved to be essential. Accordingly, those who have any hopes at all of obtaining pyrethrum over the balance of leaving no visible supply for other uses. 1943,—and at best the amounts will be very small, -had best be ready to prove the essenejality of the end use, definitely and specifically and not in any general vague manner, or else not even make an attempt to obtain supplies.



N PRESENT war-time purchasing by our armed forces, much goes on that does not become public knowledge. In the past, it has been known that the Army and Navy have bought insecticide products of doubtful value, but criticism of practices which would permit this has apparently fallen upon deaf ears. More recently, reports have been heard that units of the armed forces are buying certain branded products which upon testing by private laboratories are shown to have little or no insecticidal value. In plain language, the armed forces are again being taken in by fakers,-at least, these are the reports coming from behind war-time secrecy. We have good reason to believe that these reports are true,-and want to say once again that any purchasing practice which will permit such a condition to continue does not smell too sweet.

943

INSECT CONTROL in food production..

INCE food conservation is of such vital import in these times of war, every effort to control insects, either by preventive methods or by direct control (use of chemicals) is imperative. In Britain, the science of food storage has attained a high standard because it was realized at the onset of war that the enemy would strive to starve the people by the destruction of incoming food supplies. Hence, the matter of protecting exering food supplies was obligatory. Summarizing the experience of Britain, Eric Hardy2 writes as follows: There must be a nation-wide storage system, coordinated by a national control body; such as our Ministry of Food. When warehouses and food factories are carrying larger stocks of food than usual there is great increase of vermin, encouraged also by war conditions such as air raid damage, so there must be efficient pest control supervision. There must be a central control body, with qualified biologists and mycologists of wide experience in industrial biology at the head. There are three phases, one dealing with rodent control, chiefly rats and mice, and the others with control of insects and of molds and bacteria. They make regular inspections, investigate complaints and recommend methods of checking infestation. An association of vermin poison and bait manufacturers, ratfumigators, and so forth, works under contract.

"When cargoes arrive at a port or warehouse, they are examined by entomologists to see if they harbor any dangerous insect pests, or insects previously unknown here. Prompt action by these entomologists has already checked at the ports some that might have become nationally serious. "Food supplies are scattered to avoid loss by fire and air raid damage. Vacant basements of old mills and other buildings in out-of-the-way towns are used to store food reserves, which are inspected periodically. The cold storage system and equipment have been nationalized, so that all resources can be used to the best general advantage. Under war conditions and with limited shipping space, food supplies dantiot always be placed in rat-proof buildings, insulated transport trucks or ships specially designed for special food cargoes. Then the past question becomes most important."

In the United States, the Bureau of Entomology and Plant Quarantine have published concise information for avoiding trouble from insects in stored foods. We quote: "The first essential in avoiding trouble from insects is to make certain that the food products are not infested when purchased and put into storage. Purchasing contracts should contain the stipulation that the food materials

should be free from insect infestation. Inspection by competent inspectors of all food processing plants handling large contracts should be required. Receiving officers should be required to inspect food commodities which are subject to infestation and make sure that they are delivered in an insect-free condition so far as can be determined by a reasonably careful inspection. If infestations are detected the commodities should be rejected. The small size of the insects, especially when they are in the egg stage, makes it impossible to rely on inspection alone. Therefore, since common species may be distributed in many ways, it is important that adequate provision be taken to protect susceptible food products from infestation. Insect damage to stored food is aggravated by long storage. Infestations that are small develop to tremendous proportions after a few generations of insects. Many of the common foodinfesting insects complete a generation in about six weeks under summer temperatures. It is desirable, therefore,

Second of two articles dealing with the use of insecticides to protect our war-endangered food supply

By Dr. E. G. Thomssen and Dr. M. H. Doner

J. R. Watkins Company

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^{*} Food Industries 1942, Vol. 14(8):44-5.



Food in the processing plant is still not food on the table. Ever-careful vigilance at each step of processing, such as in the bakery, left, and the cannery, above are the price of freedom from infestation.

that the supply of susceptible stocks be held as low as practicable and that contracts be arranged so that fresh supplies are delivered at frequent intervals rather than in large lots. Food supplies subject to infestation should be used in the order of their receipt. Old stocks are not only likely to suffer damage from insect attack but serve as a source of infestation for other products nearby, hence they should always be used first."

The storage of food materials in buildings of tight construction is advisable, since not only are insects largely prevented from gaining entrance but, if infestations do occur, such buildings are readily fumigable. The screening of all doors and windows is certainly to be recommended. The Director of Procurement has specifications for screen cloth of various types.

The small size of insects enables them to hide in cracks and crevices and even breed there if suitable food is present. Cleanliness as a form of insect control cannot be emphasized too strongly. Although insecticides are useful in this connection, the elimination of refuse piles in or outside of buildings is necessary. All too frequently serious insect infestations have been traced to waste material that had escaped notice due to careless inspection.

Where practicable, the resort to higher temperatures as a means of either holding down incipient infestations or the destruction of insects in stored foods is recommended. Temperatures of around 140° F. kill insects in five minutes; 120° F. kills at exposure of five hours. In the household, the heating of infested dried foods is entirely practicable. Because of the expense of fumigating mills, heat has been resorted to and, while the expensive equipment is required its more economical use over

a period of years compensates this disadvantage. At the same time, equally as good, if not better control of insects, including the eggs, can be expected.

The use of low temperatures (zero or below for 3 to 10 minutes continuously) to kill insects inhabiting mills is effective but not always possible of attainment. More often it is possible to reduce the temperature to the point where the insects, though not killed, are prevented from breeding. A temperature of 50°F. gives good protection. Hence in those sections of the country where cold winters prevail, utilization of this form of control is recommended. Since grain that is occasionally disturbed hinders the activity of insects, turning of the grain from time to time is suggested.

Insect-Proof Containers: The packaging of flour and other food products in containers designed to

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keep insects out is an important form of preventing insect attack. Properlylined cartons or bags that are properly sealed are resistant to most insects except a few species, notably the Cadelle that can bore through the walls of containers. The use of transparent plastic films is often regarded as insurance against insects but Dr. C. L. Fluke, of the University of Wisconsin, found that their value depends upon the chemical composition and properties of the material. Experiments with American cockroaches, German cockroaches and silverfish on different types of films showed that acetate films afforded excellent protection against these insects whereas rubber films gave only fair protection while nitrate films gave the poorest protection.

An interesting new development is the incorporation of an insecticide such as nicotine sulfate in the adhesive used in bags and other containers to thwart infestations. Cured meats can be protected from skippers and two-winged flies by first wrapping them with suitable wrapping paper and then placing in heavy, tightly-woven cotton bags.

Insecticidal Control

Fumigants: Fumigation is the ideal form of control because of the penetrability of highly toxic gases throughout the insect-infested medium and into all cracks and crevices where insects are apt to exist. Hydrocyanic acid gas and carbon bisulfide have long been the favored fumigants, but within recent years, new materials have come into more or less extensive use, chiefly because of the desire to avoid hazards to human health where the treatment of edible materials is concerned. According to Dr. Roark, cocoa retains 192 p.p.m. of hydrogen cyanide at the end of 1 day and 31 p.p.m. at the end of thirty days' exposure to the gas. It is not altogether certain that even these small amounts are without danger. Ethyl formate is an effective substitute, especially useful for insects in dried fruits such as raisins which are fumigated prior to packing. The ideal fumigant for

foodstuffs, according to Roark³, is ethylene oxide which has greater toxicity than hydrogen cyanide to some insects and yet leaves a residue in fumigated products of "no toxicological significance." The discovery that carbon dioxide increases the toxicity of the aforementioned fumigant has resulted in the use of mixtures of the two for fumigating foodstuffs. Other fumigants include ethylene and propylene dichloride, chlorpicrin and methyl bromide.

The dusting of mite-infested grain with naphthalene or paradichlorobenzene at the rate of one part by weight to 1,000 parts of the grain has been successfully used in Russia. In the case of rye and oats, fumigation with hydrogen sulfide was effective. At the rate of 2 fluid ounces to 10 cubic feet of grain, benzene killed mites that had penetrated into the grain to a depth of five feet. Fumigation is an expensive operation, and while commonly practiced successfully in commercial mills and bins is out of the question for use under most farm conditions.

Protective Films: The commercial 'fly spray" or liquid insecticide is finding increasing use for destroying insect pests in mills, granaries, warehouses, in box cars, on farms and in homes. Sprays containing pyrethrum have long been so used. A commercial mixture of pyrethrum extract and isobutyl undecylenamide (IN-930) has proved to be toxic to certain resistant cereal pests. Sprays containing aliphatic thiocyanates are reported to make effective warehouse and mill sprays.

An ideal spray should not only give a high kill of all insects contacted but should have the ability to drive insects out of their hiding places where they will be exposed to the killing fog and, what is even more important, should have a residual effect. It is claimed that effect of bags treated with thiocyanate sprays persists for several days.

Judging from the work of Patter⁴ in England, the use of toxic

oil films for protecting dried fruits in warehouses against the Indian Meal Moth and Flour Moth is worthy of note. Earlier experience with hydrocyanide and ethylene oxide were unsatisfactory because of the difficulty of killing the full-grown larvae when hidden away in crevices in the structure of the warehouse and because there was no residual effect to protect against reinfestation during the period of moth activity. The insecticide consisted of three parts of highly-refined white oil (specific gravity 0.862: flashpoint closed 320° F., open 335° F.; viscosity Redwood 1 at 70° F. 118 sec.: pour test 30° F.) mixed with 1 part of a similar oil containing 6.5 per cent Pyrethrins I and II. A film of about 0.006-0.007 g. per square inch remained effective for at least 26 days, killing moths and larvae coming in contact with it. For control of moths during the emerging period, it was necessary to spray every 24 hours. Over 30,000 tons of dried fruits were successfully protected from insects by the use of these protective

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Powders: Prevention of insect attack to stored grains by the use of powders has been investigated by Farrar and Flint of the Illinois Natural History Survey. Two ounces of a mixture of copper carbonate, copper phosphate, copper cyanide and hydrated lime "gave perfect protection to wheat subjected to attack by weevils over a period of one year." Pyrethrum powder containing 0.95 per cent pyrethrins was also effective. The use of ordinary hydrated lime has been recommended to protect soybeans and cowpeas from weevils. The aforementioned investigators have found that corn in cribs can be protected from insect attack by 10 per cent oil emulsion sprays.

Conclusion

WHILE this presentation is devoted chiefly to insects which threaten food stocks, we should not fail to point out more fully that food protection begins in the field. Chinch bugs, grasshoppers, cutworms and

Ind. & Eng. Chem., Vol. 24 (6):646, 1932.
 Ann. Appl. Biol. XXV (4)836, 854, 1938.

Self-Antiseptic Properties

in **CLOTHING**

By L. H. James and Ann C. Lundell*

University of Maryland

HE life of bacteria on inanimate objects was assumed for many years to be short. As it became evident that pathogens did not necessarily die immediately upon contact with some cold, dry surface, particularly in the presence of droplets of moisture, and that insects are important vectors in disease transmission, much more constructive thought and worthwhile study has been given to the matter. The public, as well as the public health worker, has become more sanitation minded. In the laboratory we have examined the drinking glass as a carrier of pathogens, and bacterial limits for the sanitary control of eating utensils in general have been introduced. Fumigation and cleansing of seats of theatres and public meeting halls have become common practice.

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More concerted thought on general health and hygiene, supported by both laboratory data and practical experience, demonstrated that some conditions common to everyday life are contributory factors too important to be ignored. Within the past five years considerable progress has been made toward the elimination of the likelihood of persons becoming infected by contact with clothing, bedding, and other fabrics that have been contaminated by infected persons. Altogether, there is a growing appreciation of the effectiveness and economy of prevention.

The question is raised sometimes whether cloth materials that

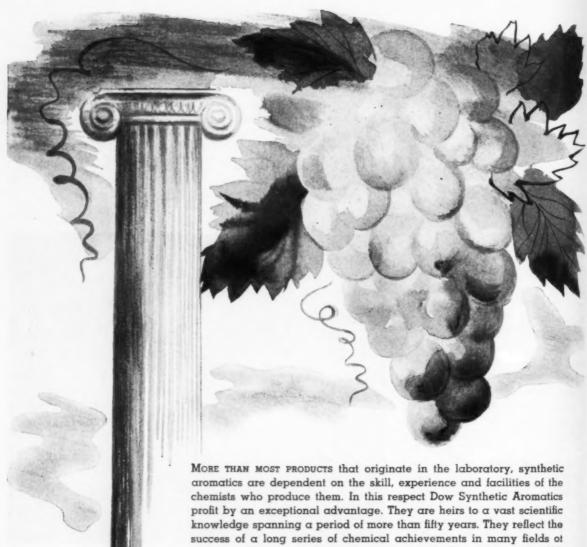


Fig. I. Plate showing material held in contact with the agar by means of glass rings.

come into contact with the skin of the body may be sufficiently contaminated to give rise later to new infections. Miss Winegar6 has shown that such garments as undershirts worn by athletes become heavily contaminated even during limited wear, and excessively so in the presence of profuse perspiration. She found that Staphylococcus aureus and Staph. albus were most frequently isolated. Jamieson and Mc-Crea3 in 1937 were able to isolate pathogens from 16 of 58 pairs of shoes that had been worn by persons with infected feet. They state that shoes are a potential source of infection and reinfection of ringworn of the feet. In the case of exanthematous infections erupting on the skin Salassa⁷ emphasized the close relationship between infectious organisms and wearing apparel. He "studied the distribution of the aerobic microscopic flora on the skin of individuals afflicted with scarlet fever * * " and concluded that the skin was "rich in germs especially on the forehead, the hands and feet." He was able to isolate Streptococcus baemolyticus frequently from the exanthema on the skin in the early stages of the disease.

Can pathogens be separated from clothing and cause infections? Apparently it is entirely possible for pathogenic organisms to be transferred back from contaminated clothing or

^{*}A portion of these data was contained in a thesis presented by Ann Carver Lundell in partial fulfillment of the requirements for the degree of Master of Science in Bacteriology.



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tive ster bate tion fabrics to the same or different persons and to give rise to new infections. Stallybrass⁵ refers to numerous cases in which smallpox developed in laundry workers who had handled clothing and bedding from smallpox patients. Also in a recent symposium on the "Practical Management of Eczematous Ringworm of the Hands and Feet" more than 75 per cent of the dermatologists stressed the importance of some form of sanitary treatment of hose and shoes to prevent reinfection or new infections.

CEVERAL treatments have been de-Veloped that are claimed to render clothing and fabrics antagnostic to microorganic life, and apparently with some success. Since the scientific literature failed to show any tests of the effectiveness or the permanence or the safety of such treatments, it appeared worthwhile to make preliminary studies of these and other factors. Such treated fabrics are supposed to exert a "selfantiseptic" action, i.e. to be antagnostic to microbial growth within the fabric, and they are not meant to provide any antiseptic action on wounds or adjacent tissues. This specialized property necessitated the development of proper methods for its evaluation and proposed standard procedures have been published elsewhere.2 Briefly, there are two types of tests, -one for self-antiseptic effects, and the other for self-sterilizing effects."

In the test for a self-antiseptic effect the U. S. Department of Agriculture strain of Staphylococcus aureus (maintained on agar containing Armour's peptone) is inoculated into fluid nutrient agar which is then poured in a thin layer into sterile petri plates. After the agar solidifies, the discs of test fabric are placed on the agar, and held in position with glass rings (Figure I). The rings are cut from relatively heavy-walled glass tubing and sterilized. The plates are then incubated. After incubation the examination consists of the removal of the glass rings and pieces of fabric, and

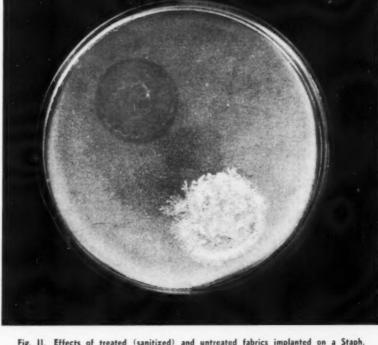


Fig. 11. Effects of treated (sanitized) and untreated fabrics implanted on a Staph. Aureus plate during incubation. Dark area shows absence of growth of Staph. Aureus. White area is bacterial growth unimpaired beneath untreated control sample.

observation of the extent of growth of Staphylococcus aureus directly beneath the fabrics. Complete inhibition of growth accompanied by abundant growth beneath the untreated control fabric is considered "Excellent" results. (Figure II.). The presence of a zone of inhibition beyond the limits of the fabric is not expected, since it would mean considerable diffusion of the agent out of the fabric and this is not the purpose of the impregnation in the first place. If the purpose in treating the fabric has been to develop properties of inhibition in the amount of liquid that can be absorbed into the fabric, there is no reason to expect that such properties would be effective either in a larger volume of liquid than can be absorbed or outside of the fabric. A laboratory test should not demand greater inhibitive powers than were intended. The amount of agar poured into the petri plates is kept to a minimum for this purpose.

The second test for the presence of a self-sterilizing effect is a de-

termination of whether or not the treated fabric produces a relatively rapid rate of death of bacteria soaked into the fabric.

Again the U. S. Department of Agriculture strain of Staphylococcus aureus is used, although it can be made with any suitable organism. Most fabrics will absorb 0.1 ml. of water or bacterial suspension completely, but some will not hold much in excess of that amount. With a thin fabric like gauze a sufficient number of thicknesses can be used in order to thoroughly absorb the 0.1 ml. A 1/100 dilution of an actively growing culture is used as the inoculum. The 0.1 ml. is soaked into the fabric and after proper holding total numbers of bacteria are determined.

The presence of a self-sterilizing effect in a Sanitized fabric was first determined using Staphylococcus aureus and the mold Aspergillus niger. The fabrics were inoculated and then held for two weeks at room temperature. For comparison other pieces of fabric

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The assistance of the U. S. Process Corporation in providing some of the materials and funds for this study is gratefully acknowledged.

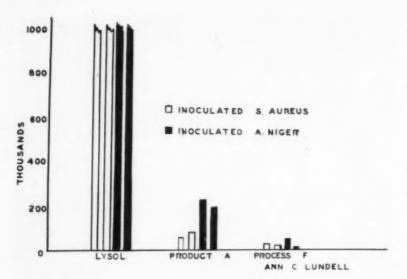


Fig. III. Counts of S. Aureus and A. Niger on inoculated treated materials after two weeks holding. Process F is the sanitized treatment.

were similarly treated with lysol and with a commercial disinfectant. At the end of two weeks the total numbers of living bacteria or molds on each piece of fabric were determined. The results, illustrated in Figure III, show that both the bacteria and the mold were greatly reduced in numbers below the effects of lysol by both Product A and the Sanitized treatment. However, it should be emphasized that neither lysol nor Product A are intended for use in the impregnation of fabrics, in fact it is probable that neither product could be safely used in that manner. They are included in these tests in order to provide some basis for appreciation of the effectiveness of the Sanitized treatment.

A justifiable question was raised as to whether or not a self-sterilizing effect should become apparent in a treated fabric soon after the bacteria had been placed on the fabric in moisture, i. e. within an hour. Six separate tests were run in which fabrics impregnated with lysol, Product A and the Sanitized process were inoculated with Staphylococcus aureus, held one hour and total numbers determined. The results are illustrated in the bar graph in Figure IV. Lysol was a little more effective than in the first series, Product A, although variable, obviously had much less effect within one hour than

it had in two weeks, whereas the Sanitized treatment again was markedly effective in reducing bacterial numbers.

A better evaluation of the effects upon bacterial numbers could be obtained if the reduction in numbers could be compared with the reduction found on a similar but untreated fabric. Therefore two pieces of the same fabric though untreated were inoculated and similarly examined, one immediately after inoculation, and the other after one hour, i. e. when the treated sample was examined. Four separate experiments were run in which the effectiveness of the Sanitized treatment alone was determined.

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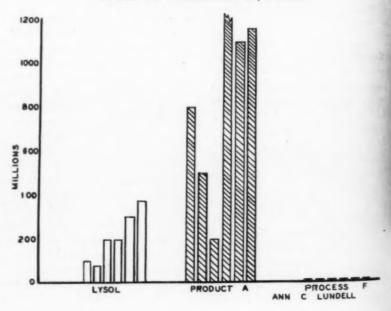
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The results (Figure V) show that on the untreated fabric there is no appreciable decrease in total bacterial numbers within the hour. They also show that the Sanitized treatment greatly reduced the numbers of living Staphylococcus aureus present within the same period of time.

I should be emphasized that this new approach to sanitation in fabrics is something distinctly apart from the therapeutic use of antiseptics and germicides. A medicated gauze sold as a vehicle for the conveyance and application of a germicide or an antiseptic on to a wound must be able to carry out its mission, and as an antiseptic it can be tested and evaluated by the procedures established by the Food and Drug Administration. But when a fabric is treated so as to have an inhibitory action against the growth of bacteria only in moisture or perspiration that is absorbed into the fabric, it should not be evaluated in the same terms as anti-

Fig. IV. Total bacterial counts on treated materials one hour after inoculation with Staph. Aureus.



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Slowly, it seems to anxious eyes, but in reality more swiftly than her enemies ever thought possible, America is gathering her strength to strike. And as she moves forward into the world struggle, the qualities that have made her great become more and more apparent. Her vast natural resources, her disciplined efficiency, her tremendous energy and confidence born of freedom—these are the things that will make her as suc-

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To Americans, Niagara has always been a sign of this strength, epitomizing in its great Falls the resources, the energy and the freedom in which we

of the American ideal is symbolized. It is one of the many unique natural wonders that express the active and potential power of a free people whose progress is derived from the exercise

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septics and germicides. This is important for two reasons: first, the product should not be held to standards that are inapplicable, and second the public should not be led to expect such treated fabrics to act as antiseptics and germicides. At one time statements in newspaper and magazine advertisements made exaggerated claims that the treated fabric is "sterile," or that it is "antiseptic," and "germ-free." More recently there has been appearing the statement that a fabric has been tested by the methods developed by the Food and Drug Administration for the examination of antiseptics. All of these statements are definitely misleading, and incidentally will tend to destroy through dissatisfaction the very market they so shortsightedly strive to establish.

Three or four types of treatment are in use on fabrics, leathers, etc., although there may be more than that number of trade names. It would be well to consider the general requirements that may be expected in such treated fabrics.

First, the properties should be present in sufficient strength to be effective, and again I want to emphasize -effective in accomplishing the purpose intended.

Second, the treated material should contain no toxic properties, even under constant wear adjacent to the most delicate skin tissue. Only mild inhibitory substances are necessary to provide the desired effects upon microorganisms within the fabrics.

Third, the property should be permanent, unless knowingly removed. Although a temporary agent that could be replenished might be satisfactory, it is likely for one reason or another the fabric would not be retreated in a percentage of cases, so that such a treatment would be less satisfactory. The possibility of rendering such treatments water repellent and therefore resistant to being washed out with water is intriguing, but careful tests should accompany such a development in order to guard against impairing the inhibitive properties against microorganisms, and also to avoid interference with such functions as the absorption, migration and evaporation of perspiration by the fabric.

Fourth, the treatment should not impair the strength, appearance, comfort or wearability of the fabric. Actual wear tests may be necessary to evaluate these points.

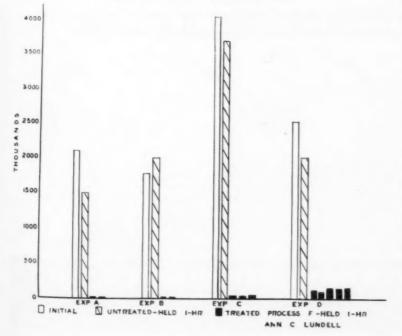
The laboratory plate test for self-antiseptic effects can be made in a relatively short period of time and may serve as the rapid test for the laboratory control of manufacturing operations. The test for self-sterilizing effect is more cumbersome and time-consuming and we hope that someone will devise a more simple procedure.

UMEROUS other studies of treated textiles and leathers have been made in our laboratory, and it appears to be entirely possible to develop in textile and leather goods permanent inhibitory properties. Treated muslin and leather have been examined over several months of storage, with no depletion in the inhibitory action. Straw hats made with treated leather sweat bands have been worn all summer and at the end of the test were fully as inhibitory as when first treated, in spite of the large amount of perspiration that had been absorbed.

Treated shoes in another test have been worn in all kinds of weather by masons, carpenters, laborers in stone quarries and on farms, cooks, and truck drivers until the soles were worn completely through, and the inhibitory properties were still present in the shoe leather and shoe linings when the shoes were returned worn out to the laboratory. At a prison where several inmates had annually suffered serious and widespread ringworm infections on the skin and reoccurrences were extremely difficult to control, a study was made of the influence of treated shoes. After active infections had been cured with salicylic acid then treated shoes were issued to the men and periodic examinations made thereafter. Note that the treated shoes were not used in any way to cure existing infections. Preliminary results indicate a definite advantage in the use of treated shoes. In fact, the treated shoes have become so sought after that other shoes have been burned to avoid recall of the test shoes to the laboratory.

This new approach to improvement in personal health and hygiene is (Turn to Page 115)

Fig. V. Showing self-sterilizing effect on inoculated fabrics. Process F is sanitized treatment.



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FLUORINE INSECTICIDES

A study of the chemical and physical properties of commercial sodium fluoride and sodium fluosilicate in relation to their insecticidal use

By R. H. Carter and E. L. Gooden

U. S. Department of Agriculture

ODIUM fluoride, basic raw material in many roach powders, dusting powders for poultry, and other insecticides, is generally made from hydrofluoric acid, which in turn is made from calcium fluoride by treatment with sulfuric acid. Phosphate rock contains 3 to 4 per cent of fluorine, which during the manufacture of superphosphate fertilizer is at least partially converted to silicon tetrafluoride. This silicon tetrafluoride can be easily recovered in the form of fluosilicic acid or fluosilicates by absorption in water, sodium chloride or sodium carbonate solutions, or other absorbing mediums. Since the fluosilicic acid is a byproduct, it should be possible to make sodium fluosilicate more economically than sodium fluoride, which is the main product of two manufacturing operations. The purpose of this investigation was to determine and compare some of the chemical and physical properties of all available commercial samples of these two compounds. Two previous surveys of the chemical composition of commercially available fluorine compounds have been made, one by Carter and Roark in 19282 and one by Carter in 1932 1

Experimental Procedure

Fifty-two samples of sodium fluosilicate and 17 samples of sodium fluoride were collected from manufacturers and dealers. These samples were representative of the products available in the United States during the winter of 1941-42, although not all of them were sold, or even recommended, for insecticidal use. No attention was

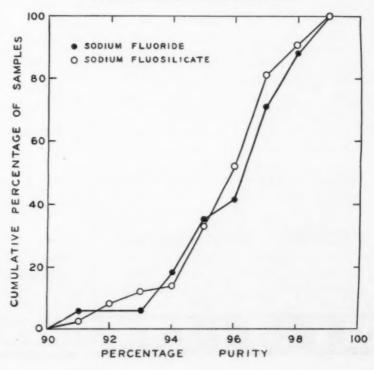
given to mixtures of either substance with fillers. One of the fluoride samples was found to be so impure that it was not included in the physical part of the survey, and one fluosilicate was omitted in the physical study because it was not dry.

The fluorine content of these samples was considered important, since this is the insecticidally active element. It was determined by the lead chlorofluoride method⁵ and calculated to sodium fluosilicate or sodium fluoride by

use of the factors 1.65 and 2.21, respectively. Small amounts of sodium fluosilicate are no doubt present in some of the sodium fluoride samples, and vice versa, but no attempt was made to estimate them.

The physical characteristics considered important were particle size, particle shape, lumpiness, and relative bulkiness. The average particle diameter (surface mean diameter) for each sample was determined by the airpermeation method of Gooden and

Figure 1.—Distribution of samples of sodium fluoride and sodium fluosilicate according to their purity.





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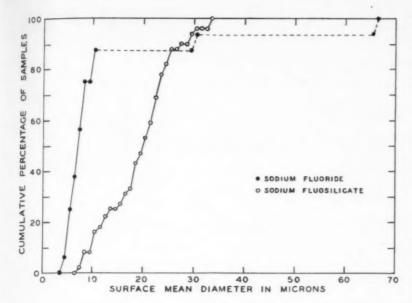
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Smith, with the modification as to method of compaction described by Gooden. If lumps were present, they were first broken up with a glass rod. The relative bulkiness was indicated by the porosity of the sample after normal compaction in the air-permeation apparatus. This porosity is the fractional

volume of voids in the column of powder; for example, a porosity of 60 per cent means that the air space be-

Figure 3.—Photomicrographs of typical samples of sodium fluoride (top row) and sodium fluosilicate (bottom row), all at same magnification.

Figure 2.—Average diameters of samples of sodium fluosilicate and sodium fluoride as determined by air-permeation method. NOTE: The broken-line portion of the fluoride curve, departing from the general trend of that curve, represents only two samples out of 16.

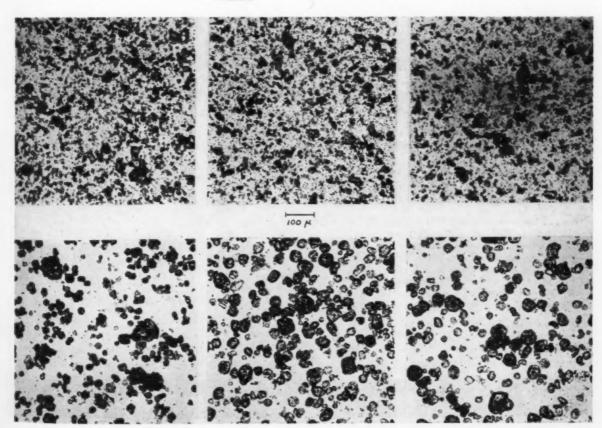
tween particles amounts to 60 per cent of the apparent volume of the column and the remaining 40 per cent is the actual volume of the particles.

Results

Purity: The distribution of the samples according to their purity is illustrated in figure 1. All but two of the sodium fluoride samples were between 93 and 99 per cent pure, and all but one of the sodium fluosilicate samples were between 82 and 100 per cent pure. The exact nature of the impurities was not determined, but they consisted mainly of hydrated silica.

Particle Size: The full record of observations on mean diameters is shown in figure 2. The typical fluoride

(Turn to Page 117)



March, 1943

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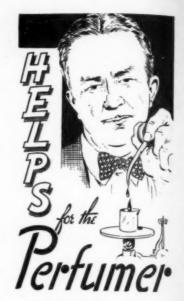
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INSECT REPELLENTS . . .

Demand for use by armed forces puts new life into a dead market with promise of post-war expansion

ICE, fleas, flies and mosquitoes,these are the scourge of the American soldier in Africa. As reported by those who have returned from the so-called dark continent, the everlasting annoyance of bugs, bugs and more bugs has a more devastating effect on American morale than the bullets and bombs of the Germans and Italians. They say that Africa is the buggiest place in the world, not only the country itself, but the native population as well. Seldom, it is said, does one see an Arab or other native who is not continuously scratching some part of his anatomy.

American Army officials are thoroughly cognizant of the insect dangers of Africa and particularly are they conscious of flea-borne typhus. And they do not intend to permit any insect-borne disease to gain a foothold among Americans. If it requires delousing the entire population, natives and soldiers both, Americans in Africa will be given the maximum protection. This may account to a considerable extent for the heavy demand for insecticides and repellents for the Army, and for the predictions of a tremendous increase in demand for these materials, particularly the need for many millions of cans of louse powder during 1943, and well as practically all available inspect repellents in the U.S.

That the insect problem is one of the Army's chief problems, not only in Africa, is further evidenced by reports of the building of the Alcan Highway, the military road which was cut through 1,650 miles of Canadian and Alaskan wilderness by the U. S.

Army Engineers in the summer of 1942. The 10,000 Army engineer troops who performed this marvel in military road building were never daunted by rain, mud, cold, long working hours or isolation in the wilderness. The hordes of mosquitoes, black flies and gnats, however, were a tremendous problem in the matter of morale. The ever-present insects were a source of constant annoyance and interfered greatly with working efficiency. But the problem of insect-borne disease was not the serious matter in the north woods which it is in the African campaign or in other tropical regions where American armed forces are stationed.

Nor does it seem that the problem of insect repellency is confined to the Army alone. Recently the New York Navy Purchasing Office, N. Y., asked for bids on 500,000 two-ounce bottles of a liquid insect repellent. The publication of the bid of 16.25 cents per bottle by National Carbon Co., New York, in the United States Government Advertiser marks what is thought to be the first information revealed about insect repellent purchases or bids. Whether the silence is due to the newness of developments in repellents, or secretiveness on the part of the military authorities is not known. Improved repellents that have a lasting power superior to anything heretofore marketed for civilian use have recently been produced.

As a result of the growing demand for insect repellents by our armed forces in all parts of the world, a new market has opened up for their manufacturers. The market for repellents is not a transient one either, for, based on improvements that have been greatly accelerated by the war, the post-war civilian possibilities appear good. Manufacturers working along the lines of insect repellents have recently blossomed forth with a number of new products, some improving on older ideas and still others approaching the problem from entirely new angles.

New media for the solution of the insect questions include such varied products as: "2-Way," an insecticide screen paint that is claimed to repel and kill on contact by application to screen doors, netting, etc. It is made by Hanley & Kinsella Laboratories, Inc., St. Louis, and comes in 4-oz., 8-oz., pint, quart and gallon sizes. "2-Way" is also claimed to repel chiggers, the scourge of the Army during maneuvers in North Carolina last year. Application is by spreading on areas exposed to chiggers. This repellent is also claimed to keep flies off livestock by adding 25 per cent to any livestock spray. As a flea, tick, gnat or lice repellent on household pets, a few drops on each square foot of fur is recommended by the manufacturer.

"Screen" is another new insect repellent which was recently introduced by Airkem Corp., New York, based on the use of a "plant extract," chlorophyll and certain essential oils. "Screen" is made to retail for 35 cents in a two-ounce bottle. It is a further development of a chlorophyll deodorizer which is manufactured by Airkem, Inc.

A third new repellent is Ced-R-Wood, manufactured by the Sparhawk

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Cheerfully—eagerly, because it's our contribution to Victory, all of us have accepted the fact that for the duration, we will have to tighten our belts and "do without."

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Co., Sparkill, New York. Ccd-R-Wood is a non-volatile cedar preparation to repel fleas around fox and dog kennels, etc. It is applied by spreading over walls or flooring to be rendered insect repellent. Ced-R-Wood dries in time, leaving a resinous film. It is stated to contain a plastic ingredient to hold it and retain the odor.

There are a number of other older and well-known repellents which have gained and kept some sort of a following. Among these is oil of citronella, a family stand-by for years, but of questionable effectiveness. Its heavy odor is fairly long-lasting and objectionable. Mixed with lavender its fragrance is improved, as is its effectiveness generally, according to one source of information.

Commercially, there have been several repellents in various forms with trade marked names: "Sketofax," "Sta-Way," "Llacopap," "Flit Lotion" and "Mosquitone," to mention a few. Sportsmen, hunters, fishermen, hikers, campers, gardeners, and the general public in the summer months are the

prospective users. "Sketofax," made by Burroughs Wellcome & Co., New York, is an aromatic cream made of oil of cassia, camphor, petrolatum, lanolin and beeswax. It is packed in a tube and retails for 25 cents. "Sta-Way," made by National Carbon Co., New York, was a liquid repellent, discontinued June 29, 1942, after having been on the market for several years previously. Inability to secure necessary raw materials going into its manufacture was given as the reason for its discontinuance. Another product that has been discontinued is "Mosquitone," made by McKesson & Robbins, New York. It was packed in a stick in a solidified form.

Abercrombie & Fitch, New York, one of the best known sporting goods stores, and who were probably one of the leading retail outlets for insect repellents, reported that they were completely out of repellents in late February. They have sold "Llacopap" for many years, and say that the product has been made for 50 years. It is in the form of a grease, comes in a small

tin to retail for 25 cents. "Llacopap" is claimed by the store to be exceptionally effective. "A&F" also sell a cream bearing the Abercrombie & Fitch name. It comes in a tube and retails for 50 cents. Stanco's "Flit Lotion" is in the form of a liquid and is sold in small glass bottles.

THE future for insect repellents appears bright, according to those who have been working in close contact with various governmental departments in devising an effective and cheap repellent for the armed forces. It is the feeling of several of those people who have been connected with insect repellents in the past and are now working on the problem concerning improvements, that in the past the biggest drawback to broadening the market was the actual lack of effectiveness of the products then sold. All who are in on the more or less secret dealings with the government feel that what has been accomplished in the past few months will completely revolutionize

(Turn to Page 121)

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NEW INSECTICIDE MATERIAL

HE widespread use of highly refined petroleum-base sprays for the control of houseflies and other insects has stimulated research on toxic materials to be used in such sprays. Pyrethrum extract is frequently used as a toxicant. Other materials that have been found toxic to houseflies when used in sprays include rotenone and rotenone-bearing extracts (Roark 1931), (Campbell, Sullivan, and Jones 1934), beta - butoxy - beta' - thiocyano diethyl ether (Murphy and Vandenberg 1936), fenchyl and bornyl thiocyanoacetates (Borglin 1941), and dioctylamine (Ralston, Barrett, and Hopkins 1941). The effectiveness of fly sprays also has been improved by the addition of activators, or synergists, for pyrethrum. Alphanaphthyl isothiocyanate (Tischler and Viehoever 1938), ethylene glycol ether of pinene (Pierpoint 1939), sesame oil (Eagleson 1940), sesamin (Haller, McGovran, Goodhue, and Sullivan 1942), isosesamin and asarinin (Haller and La Forge 1942) (Haller, LaForge, and Sullivan 1942), acylated 1, 3-indandiones (Kilgore et al. 1942), and other materials have been reported as increasing the effectiveness of pyrethrumbearing fly sprays. With these developments in mind, studies were made with alpha, beta-dibromo-beta-nitroethylbenzene to determine if it acted as a toxicant or synergist for pyrethrum in fly sprays.

Materials and Procedure: — Alpha, beta-dibromo-beta-nitroethylbenzene (C₆H₅ CHBrCHBrNO₂) (Schechter and Haller 1940) was prepared by condensing benzaldehyde with nitromethane in the presence of alkali to give omega-nitrostyrene, which was then reacted with bromine in chloroform solution to yield the desired product which was then recrystallized from ligroin. It is a colorless crystalline solid having a slight odor, but it is prac-

Table 1—Mortality of houseflies treated with kerosene sprays containing alpha, beta-dibromo-beta-nitroethylbenzene and pyrethrins.

Material added to deodorized kerosene	Concentration Mg./ml.	Mortality in 24 hours' Per Cent
Alpha, beta-dibromo-beta- nitroethylbenzene	(10 (20	13 81
Alpha, beta-dibromo-beta- nitroethylbenzene + pyrethrina	$\begin{cases} 5 + 0.5 \\ 10 + 0.5 \end{cases}$	27 47
Pyrethrins	$\left\{\begin{array}{l}1\\2\end{array}\right.$	52 70

Differences greater than 15 per cent are significant,

tically odorless when dissolved in highly refined kerosene.

This material, with and without pyrethrum, was dissolved in deodorized kerosene and tested on adult houseflies, Musca domestica L., by the turntable method. Knockdown and mortality percentages were calculated on the basis of six replicates of approximately 150 flies each. The concentration of alpha, beta-dibromo-beta-nitroethylbenzene in the sprays was adjusted to cause mortalities comparable with those caused by 1 or 2 mg. of pyrethrins per milliliter of spray.

Results: — The knockdown in 10 minutes caused by all the sprays containing pyrethrum was 100 per cent. In the sprays that contained alpha, beta-dibromo-beta-nitroethyl-

benzene alone, 10 mg. per milliliter of deodorized kerosene caused a 10 per cent knockdown and 20 mg. a 95 per cent knockdown in 10 minutes.

The results given in table 1 show that alpha, beta-dibromo-beta-nitroethylbenzene at 20 mg. caused a higher mortality of the flies than 2 mg. of pyrethrins. At 10 mg. this material was ineffective, but when combined with 0.5 mg. of pyrethrins it caused a mortality approaching that of 1 mg. of pyrethrin spray. At 5 mg. this material combined with pyrethrum was less effective. Additional tests with the same concentrations of toxicants, but with mortality counts made 48 hours after the spray was applied, gave mortalities similar to those in table 1.

(Turn to Page 117)

Study of the toxicity of alpha beta dibromo-beta-nitroethylbenzene in oil sprays against houseflies

By E. R. McGovran, M. S. Schechter and J. H. Fales

Bur. Entomology & Plant Quarantine A. R. A., U. S. Dept. Agriculture

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Insecticide Coloration in Legislative Spotlight

THAT the federal Insecticide Act of 1910 will be amended in the near future to require the coloration of insecticide poisons is very likely, according to Washington advices. Officials of the U.S. Department of Agriculture are advocating a change in the law to make coloration mandatory believing along with some state enforcement officials that if the federal government sets the example, not only will interstate shipments of insecticide poisons be regulated in this respect, but that state legislatures will follow and pattern their coloration laws after the style of the federal wording making for uniformity throughout all states and avoiding hardship on insecticide manufacturers.

More than the usual number of fluoride poisoning cases over the past year, particularly several accidents resulting in wholesale deaths at public institutions, have focused attention of both federal and state officials on the problem. A study of insecticide coloration, particularly the fluorides and silicofluorides,-the dyestuffs and colors, method of application, and required concentration,—is now being made by the Division of Insecticide Investigations of the U.S. Department of Agriculture. The National Association of Insecticide & Disinfectant Manufacturers is actively cooperating in this work.

The wording now being proposed by the Department of Agriculture for inclusion in the Insecticide Act of 1910 is as follows:

"That section 7 of The Insecticide Act of 1910 (36 Stat. 331, 7 U.S.C. 1940 ed. 130) be amended by striking the period at the end of said section, inserting a semicolon in lieu thereof, and by adding the following: "Provided, bowever, That any white powder insecticide or fungicide containing arsenic in its elemental form or in any of its combinations, or

fluorine in any of its combinations, shall, unless deemed unnecessary by the Secretary of Agriculture for the protection of the public health, be deemed to be adulterated unless it is distinctly colored in accordance with regulations promulgated by the Secretary of Agriculture. The Secretary of Agriculture is hereby authorized to make and promulgate rules and regulations for carrying out the provisions of this proviso, and to specify the colors and the compounds or substances to be used to produce such colors."

New legislation affecting the coloration of poisonous insecticides has been introduced in Oregon, Texas and California, and in New Jersey an amendment to the State Pharmacy law covering the same point is also said to be in the stage of preparation, although not as yet having been introduced as a formal bill. The Texas Bill (Senate No. 5) is primarily a control measure affecting agricultural insecticides. It follows the general wording approved by the NAIDM for such laws, specifying that highly toxic materials be "distinctly colored."

California Assembly Bill No. 1238 does not follow the wording suggested by the NAIDM, providing instead that any product containing fluorides be colored "deep red, deep green, deep purple or deep blue." The Oregon Senate Bill (No. 73) also departs from the suggested NAIDM wording, and prescribes "pink" for arsenicals and "blue" for fluoride. The proposed new bill in New Jersey adheres to the suggested "distinctly colored" wording, but does not allow for exemption suggested in the standard NAIDM clause for "products sold for manufacturing or technical uses."

Suggested rewording of the California Bill. No. 1238 which in its original form does not meet the approval of insecticide manufacturers,

has been proposed by enforcement officials of that state and is reported to have the approval of the author of No. 1238. In rewording, the present wording would be stricken out completely and in its place would be inserted: "Any economic poison in powdered form containing more than 1 per cent of fluorine for use in any building, vessel or similar enclosure, shall be colored nile blue, except when the Director (of the California State Department of Agriculture) in his discretion may waive this requirement." This discretion would obviate coloration where fluorides are used in laundries and for other technical purposes and where color would interfere with use. The Pacific Insecticide Institute is offering its own amendment to Bill No. 1238 which will also be somewhat along the above line and will probably include arsenicals as well as fluorides.

Revoke Insecticide Priority

General Preference Order P-87, covering materials for insecticides, germicides, and fungicides, was revoked February 20, 1943, by the War Production Board. Formerly, under Order P-87, a rating of A-10 was assigned producers of insecticides, germicides and fungicides and to suppliers of materials to be delivered to producers. However, the rating has lost its significance through changes in the rating scale and since many of the materials have been placed under allocation.

L-197 Allows Drum Replacements

The National Association of Insecticide and Disinfectant Manufacturers, New York, is advising its members that those who are eligible for stock renewals of steel drums and who are experiencing difficulty because of stock depletions due to wear, damage and losses may apply for replacement drums on Form PD-717. This is in accordance with provisions of Order L-197, which, in List B, gives the materials that may be shipped in steel drums. Forms may be obtained from the Containers Division of the War Production Board.

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with increasing restrictions. Every manufacturer, equipped to produce essentials, is called on in an all-out war effort in production. This situation in our plant is indicated by the fact that for the duration of the present emergency, we have ceased manufacturing Adam A. Breuer's ELECTRIC INSECTICIDE SPRAYER.

Our sincere desire is to serve our customers with their needs in Insecticide Sprayers, but in view of prevailing conditions we must ask you to continue being patient until we can again supply your insecticide Sprayer requirements. For your cooperation and understanding we wish to express our appreciation.

We do not sell insecticides. Our business is the manufacture of Sprayers. (Patented in U. S. A. and fereign countries).

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NEWS

NAIDM Board Meets

A meeting of the Board of Governors of the National Association of Insecticide & Disinfectant Manufacturers was held at the Hotel Pennsylvania, New York, on March 4. The meeting was conducted by John Curlett of McCormick & Co., Baltimore, president of the Association. Following the board meeting, members attended the annual Drug, Chemical & Allied Trades dinner at the Waldorf-Astoria Hotel, New York, in a body.

Name Wax, Polish Committee

Appointment of an advisory committee for the waxes and polishes industry was announced February 2 by the War Production Board. Wells Martin, deputy chief of the Protective Coatings Section, is the governmnt presiding officer. Industry members are:—

J. R. Ramsey, S. C. Johnson & Son, Racine, Wis.; H. E. Reinhardt, Jr., American Home Products Co., Jersey City, N. J.; H. T. Hawthorne, Socony-Vacuum Oil Co., New York; Stephen Corboy, The Simonize Corp., Chicago; W. A. Dolan, Wilbert Products Co., New York; C. R. Ely, R. M. Hollingshead Corp., Camden, N. J.; and William F. Polnow, Vestal Chemical Laboratories, St. Louis.

To Distribute Silver Polish

I. B. Kleinert Rubber Co., New York, has recently taken on distribution of "Silverfleece" silver polish, a product of Earl Products Co., Chappaqua, N. Y. This is reported to be the first time that Kleinert has taken on distribution of an outside line. National advertising will be used to introduce "Silverfleece."

Lt. Hoffman in Alaska

Lt. Edward Hoffman, formerly chemical engineer of Superior Chemical Products, Inc., Philadelphia, manufacturers of the insecticide "Omnicide," is now stationed with the U. S. Army somewhere in Alaska. He was recently transferred there from El



LT. EDWARD HOFFMAN

Cajan, Calif. Mr. Hoffman organized Superior Chemical Products following his graduation from Massachusetts Institute of Technology. He has been in the service since June, 1942.

West Offers New Products

Two new products for use by war workers in arsenals and ordnance plants have just been introduced by West Disinfecting Co., L. I. City. Designed to give protection against tetryl dermatitis, the new products are a special liquid soap and a protective cream. The soap is said to be particularly effective in removal of tetryl and TNT. The base of the protective cream is insoluble in tetryl and is said to serve as an excellent protection.

Barrett Plant Gets "E" Award

The Army-Navy "E" for excellence in the production of vital war chemicals was awarded on February 5 to employees of the Frankford plant of the Barrett Division, Allied Chemical & Dye Corporation. The Barrett Division is the nation's largest producer of coal-tar chemicals. This will be the third Army-Navy production award to

be won by a unit of Allied Chemical & Dye Corporation, the others having gone to the Hopewell, Va. plant, which makes nitrogen products, and the Syracuse, N. Y. plant, which makes toluol.

Another Fluoride Tragedy

Miss Kathryn Karfil of Brooklyn, is the latest reported victim of sodium fluoride poisoning resulting from household use of white fluoride as an insect poison. Taking a dose of what she thought was sodium bicarbonate from a box stored in a bathroom medicine chest, she took instead a fatal dose of fluoride.

Rolstead Joins Skol

Marvin J. Rolstead formerly of U. S. Industrial Chemicals, Inc., New York, and the Rohm & Haas Co., Philadelphia, became associated with the Skol Company, New York, on Feb. 8. His new work is in the development and marketing of insect repellents and insecticides in the retail and other markets by Skol. He has been active in the sale of insecticide materials for the past ten years. Skol Co. has been supplying the U. S. Army with large quantities of insect repellents.

C. E. Krebs' Son Weds

The marriage of Antoinette de Grandval to Lt. Walter O'Neil Krebs, of the U. S. Army Air Corps took place in the Post Chapel of Fort Sam Houston, Texas, February 4. Lt. Krebs is the son of Charles E. Krebs, president and treasurer of American Standard Mfg. Co., Chicago.

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Suggest Rotenone Dust Label

A suggested sample label form for the new 0.5 per cent rotenone dusts, the maximum concentration to be allowed under the terms of the newly issued Rotenone Order M-133, has just been issued by W. H. Moyer, chief of the Insecticides and Fungicides Unit of WPB. The suggested form gives labeling requirements acceptable to the WPB and the essential directions for use needed to meet the labeling requirements of the Insecticide Act

Insecticide Committee Meets

Household and Industrial Insecticide and Disinfectant Manufacturers Industry Advisory Committee of WPB met in Washington on February 22. Warren H. Moyer, chief of the Insecticide and Fungicide Section of the Chemicals Branch of WPB presided. Various problems of the industry in connection with the war effort were discussed including the shortage of glass containers which appears to be developing. Any standardization of glass bottles for insect sprays for the 1943 season was indicated as remote and it is expected that standardization will be completed late in 1943 to be effective in 1944. Some relief in replacing used steel drums to avoid hardship on manufacturers and also to eliminate cross hauling and waste of containers was believed likely. Manufacturers were further urged to insist upon drum return where it is feasible and economical.

The acute nature of the WPB personnel problem at the present time was explained as well as the tremendous increase in the work of all departments making it physically impossible to give prompt attention to industry matters. In view of the fact that most WPB divisions are literally swamped with work and have insufficient personnel, industry was asked to temper its criticism and actions in keeping with the emergency nature of the situation. The same situation was stated to apply to OPA. The next meeting of the insecticide and disinfectant group will be held in Washington on March 30.

MM&R Test Deodorant L-37

Because of changes in fly spray and disinfectant formulae resulting from war-time restrictions on the use of some toxic agents, Magnus, Mabee & Reynard, Inc., New York, have recently conducted a series of tests with a group of the newer synthetic insecticides in an effort to determine the effectiveness of their deodorant L-37. It is reported the tests showed that L-37 tended to neutralize all the undesirable odor features of the toxic ingredients, as well as the several different types of diluents commonly

used in the manufacture of sprays. It is further claimed that by using L-37 a smaller volume of perfume oil was shown to be necessary. At the same time a price reduction of the neutralizer was announced.

Professional Exterminators Meet

Members of the Professional Exterminators Association met February 25, at the Hotel Commodore, New York. Chief among the topics discussed was the manpower problem, and plans were made to have members of the association assist each other in sharing services of spare employees. The organization plans a concentrated course in insect identification and classification. The first lecture on this subject will be held March 15, and subsequent lectures in the series will follow at two-week intervals. At the February 23 meeting, a purse of \$50 was collected as a contribution to the Red

Offer New Deodorant

Givaudan-Delawanna, Inc., New York, has just announced a newly developed deodorant for iso propyl alcohol which is being marketed under the name "Alcocene." It will be of interest to many former users of ethyl alcohol who have been forced to shift to use of iso propyl alcohol.

Report Pyrethrum Allocations

For the month of February the WPB allocated for general insecticide use 28 per cent of the quantity of pyrethrum called for by civilian users. Percentage allocation for agricultural purposes was 26 per cent of the requirements, and for export, 19 per cent.

Canada PCO Conference Mar. 18-20

Pest control operators planning to attend the scheduled First Canadian Pest Control Operators' Conference, to be held at the University of Montreal, Montreal, Que., March 18-20, have been asked to make their reservations with Professor E. R. Bellemare at 2900 Mt. Royal Blvd., Montreal. The registration fee for the conference is \$3.00 which also covers the cost of a copy of the Outlines for the conference.

Chicago PCOS Meet

Chicago pest control operators who met February 24 to consider the advisability of organizing a state-wide trade association, have decided that the time is not yet ripe for such a move. Thirty persons representing about 25 per cent of the exterminating companies operating in Chicago, responded to the invitation for the meeting, which had been issued by a group headed by C. E. Renfroe, of Renfroe Exterminat. ing Service. Following dinner at the Medina Club, there was lengthy discussion both for and against the proposal, but the final judgment, recorded as unanimously made, was opposed to any formal association for the present. It was agreed, however, to continue the meetings as a social group, although no attempt will be made to enroll members.

The question of organizing an Illinois association has been under discussion for years, but nothing definite had been attempted until Mr. Renfroe, with J. J. Graven of Master Exterminating Engineers and E. Coury of Statewide Exterminating Co., decided that definite start could be made if a charter were first obtained. The Illinois Pest Control Association was accordingly incorporated under a charter issued by the Illinois Secretary of State, January 27. Mr. Renfroe became temporary president, Mr. Graven temporary vice-president and Mr. Coury temporary secretary-treasurer. - + ---

Lehn & Fink Earnings Up

Lehn & Fink Products Corp.. Bloomfield, N. J., for the six months ending December 31, 1941, showed a net profit of \$350,948 or 87 cents a common share as against \$348,387 or 87 cents for the same period in the previous year.

Hollingshead Appointments

J. W. Klapp has been appointed by R. M. Hollingshead Corp., manufacturers of sanitary supplies, Camden, N. J., as sales manager of the Whiz household division. N. T. Corson has been named general manager of the All-Nu products division.

Issue New Ohio State Insecticide Specification

NEW specification for insecti-A cide concentrate has recently been issued by the State of Ohio which prescribes that acceptable products must pass tests against roaches and bedbugs, as well as the customary Peet-Grady test against flies. Killing power against roaches and bedbugs is to be determined by the current method developed by Ohio State University until such time as official methods for such tests may be adopted by the National Association of Insecticide and Disinfectant Manufacturers. In submitting bids under the new specification manufacturers must accompany them with results of laboratory tests against all three insects. Complete text of the new specification is as follows:

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SPECIFICATION MANUFACTURING AND SALES State of Ohio.

Concentrate for Manufacturing Insecticide for General Insect Control

These specifications call for a concentrated liquid insecticide (concentrate) to be used in the manufacture of household insecticide (liquid spray type) for the control of flies, roaches, bedbugs, silverfish, moths, etc.

This concentrate shall meet the requirements as set forth below with insecticidal value against specific insects determined as follows:

The concentrate, when diluted 1 part of concentrate to 19 parts of base oil by volume, shall have an insecticidal value against flies equivalent to Grade AA as determined and defined in paragraphs 3 and 4 of Commercial Standard CS 72-38.

ROACHES

The concentrate, when diluted 1 part concentrate to 5 parts base oil by volume shall have an insecticidal value against the German roach equivalent to Grade AA and defined in paragraph 4 of Commercial Standard CS 72-38.

The killing power of the diluted concentrate against German roaches shall be determined by the current Ohio State University method until an official method of the National Association of Insecticide and Disinfectant Manufacturers, Inc., shall have been

adopted for tests of such insecticides against crawling insects. The official Test Insecticide of the NAIDM shall be used as a standard of comparison in these tests.

BEDBUGS

The concentrate, when diluted 1 part concentrate to 19 parts base oil by volume shall have an insecticidal value against the bedbug equivalent to Grade AA as defined in paragraph 4 of the Commercial Standard CS 72-38.

The killing power of the diluted concentrate against bedbugs shall be determined by the current Ohio State University method until an official method of the National Association of Insecticide and Disinfectant Manufacturers, Inc. shall have been adopted for tests of such insecticides against crawling insects. The Official Test Insecticide of the NAIDM shall be used as a standard of comparison in these tests. GENERAL REQUIREMENTS

The concentrate when diluted 1 part concentrate to 6 parts base oil by volume, shall meet the general requirements set forth in paragraphs 5, 6, 7, 8, 9 and 10 of the Commercial Standard CS 72-38 of the National Bureau of Standards.

Unless otherwise instructed, the bidder must submit with his bid results of tests against the three above named species of insects. For test the bidder shall submit the concentrate that he intends to furnish. These tests shall be made by an independent laboratory by the method as specified for the specified insects.

Test samples will be taken by the State from the contractors' shipment and will be tested for conformity to specifications on insecticidal performance in a laboratory to be chosen by the State. These tests will be made by the methods cited above. If the material delivered fails to meet the specifications, the cost of these tests will be charged to the contractor.

FAILURE TO MEET SPECIFICATIONS

If the material fails to meet the specifications, it shall be rejected and, if the buyer so elects, the contractor will be required to make satisfactory replacement within 10 days at his expense, including all transportation costs and the cost of testing both original delivery and replacements, or the State may take other appropriate action.

Enterprise In 50th Year

To commemorate its fiftieth anniversary, Enterprise Paint Mfg. Co., parent company of Federal Varnish Co., Chicago, has published a 12-page booklet tracing the history and development of the firm along with the important news events of the times.

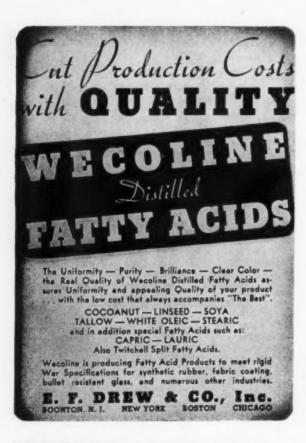
Floor Sweep in Retail Carton

Philip Carey Mfg. Co., Lock-land, Cincinnati, Ohio, has just offered for distribution through jobbers an eight-pound retail carton of its new "Grease Ball" non-inflammable asbestos base sweeping compound. The product is also packed in 50-pound bags.

Penna. Refining Elects Two

Paul R. Beck was recently elected president of Pennsylvania Refining Co., makers of petrolatums, insecticide bases, waxes, etc., Butler, Pa. John Beck, Jr. is newly elected as secretary and treasurer.

INSECTICIDE technical experts raise serious doubts that any commercial products now available for civilian use would be able to meet the rigid performance tests set up in this new Ohio State specification. They point out that with pyrethrum and rotenone practically unavailable, no commercial product which can now be made would, in the dilution specified, meet the rigid tests. Only a product made from several concentrates, now no longer available, with an activator as a further added ingredient, would meet the Ohio State requirements. These experts suggest that it may be found necessary to adopt a temporary, emergency specification for the duration of the war, providing for less rigid requirements on dilution.



Peck's OIL SOAPS

DELAYS.... In spite of war demands, raw material and other difficulties, PECK'S PRODUCTS is still doing its utmost to supply promptly the needs of its regular customers. Delays in delivery are beyond our control, and we ask our old customers to bear with us under present conditions.

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Scents in Exterminating

The suggestion has been made by Charles V. Sparhawk of Sparhawk Co., Sparkill, New York, that effective use might be made of animal odors, such as the skunk, the weasel, the muskrat, etc., in the formulation of attractants and repellents for the insecticidal use. He reminds of the effect of the presence of a cat or a ferret in a building in eliminating the rodent problem, pointing out that the scent of the rodent's natural enemy is enough in itself to rid the premises of infestation. The skunk, a member of the weasel family. is even more effective in such cases, he suggests. Inclusion of glandular extract of the skunk in commercial repellents should add immeasureably to the efficiency of the materials, he believes.

As an attractant, he believes that the inclusion of a small quantity of musk-rat bait in the form of a glandular extract should act as a powerful lure for any creature that feeds on meat. The power of musk to distribute itself in the atmosphere is well known,

Insect Control in Foods

(From Page 92)

army worms, white grubs, the Hessian fly, wireworms, blister beetles, corn ear worms, European corn borer are just a few "million-dollar" insects that can cause critical food shortages. Disease and insect-resistant varieties of plants should be grown whenever possible and, where such types are not available, every effort should be made to prevent insect or diseaseproducing organisms from damaging the seed not only prior to planting but by appropriate treatment of the seed at the time it is planted. From then on, as the crop is developing, every effort must be made to prevent insect attack.

With the scarcity of agricultural insecticides as now obtains, frequent inspection of the crops should be made and the use of insecticides or fungicides resorted to at the first signs of infestation. With the decreased levels of rotenone and pyrethrum which will appear in dusts in 1943, every effort should be made to control the insects during the

and even a minute amount should be sufficient to attract meat-feeding animals, in particular rats and mice. Such an attractant would possess an inherent advantage over the usual essential oils which are extremely volatile and rapidly dissipate in the air. Animal baits, Mr. Sparhawk also points out, would be effective over a much wider area.

Dreyer Representative Dies

George T. Denby, well-known to the essential oil trade, died February 9 at St. Elizabeth's Hospital in New York City, after an illness of several months. Mr. Denby was a member of the sales organization of P. R. Dreyer Inc., and represented that firm in St. Louis and New York City.

Cubicciotti Joins Sonneborn

Rudolph R. Cubicciotti, formerly with Union Oil Co. of California, has just joined L. Sonneborn Sons, Inc., New York, as executive assistant to Julius F. Roten, vice-president.

earlier stages of their development when they are most susceptible to insecticides. Cultural practices of crop rotation and planting schedules (as wheat for the Hessian fly) should be kept in mind. Insect control in the field must be exercised in order to minimize chances of infestation of the harvested product.

Insects in relation to semiprocessed foods such as milk opens up the important field of fly control and the practical utility of cattle sprays. The repelling of flies from cows in the barn during the milking period and while grazing in the field is essential for maximum milk production according to many authorities.

In conclusion it can be said that while perfect control cannot always be obtained for all types of insects that attack stored foods, careful application of the various control measures now recommended by entomologists will go a long ways toward preventing a food crisis as far as insects are concerned. The methods are practical and it's everybody's problem.

Antisepsis in Clothing

(From Page 97)

looked upon by some as still being in the experimental stage. However, within the past eight years, more than 50,-000,000* leather hat bands have been given one of these treatments. Some 15,000,000 mattresses have been made antagnostic to bacterial growth, including those used by the famous quintuplets in Canada. More than 2,000,-000 pairs of canvas shoes were marketed with this self-antiseptic property. It has also been extensively applied in commercial laundries where it is incorporated in the personal contact items in the final rinse. More than 4,000,000 pieces of "personal contact" laundry have received this treatment. It is no longer in the experimental stage.

Several recent publications have outlined methods for evaluating germicides which may be used "for application to inanimate objects." Laboratory workers and hygienists will quickly recognize a wide gap between a demonstration of germicidal power in the test tube and the safe and proper use of that substance on inanimate objects which come into constant close contact with delicate tissues.

The further development of sanitation in fabrics and wearing apparel is a matter of real concern and responsibility on the public health worker. The idea has merit. There is a widespread need for processes that will not only safely prevent bacterial growth in absorbed body exudates, but will also eliminate dangerous contamination from textiles and similar materials. Some processes have been developed that meet these needs to a greater or less degree. They should be encouraged, especially so long as they adhere to the original and primary purpose, that of self-sanitation, of fabrics.

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^{*} Personal communication.



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New Insecticide Material

*

(From Page 107)

In similar tests alpha, betadibromoethylbenzene (styrene dibromide) at 50 mg. per milliliter in deodorized kerosene gave low mortalities of houseflies, being approximately equal to those given by 0.5 mg. of pyrethrins.

Summary: - When tested by the turntable method, a spray containing alpha, beta-dibromo-beta-nitroethylbenzene at 20 mg. per milliliter in deodorized kerosene caused a higher mortality of houseflies, Musca domestica L., than a spray containing pyrethrum extract at 2 mg. of pyrethrins per milliliter. This compound at 10 mg. per milliliter of spray combined with 0.5 mg. of pyrethrins was about as effective as 1 mg. of pyrethrins.

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Fluorine Insecticides

(From Page 101)

is distinctly finer than the typical fluosilicate. Because of one outstandingly coarse sample among the fluorides, their total range of surface mean diameters more than covers that of the fluosilicates; but when the middle twothirds of the samples were compared, the surface mean diameters of the fluorides were 5 to 10 microns, and of the fluosilicates 11 to 25 microns.

Sieve tests were run on about half the fluosilicate samples, taken at random and representative of the entire series. No correlation between sieve results and permeation measurements was found, nor should such correlation be expected, because most of these materials are too fine to be analyzed fully with sieves. In most of the samples subjected to sieve tests 76 to 99 per cent (by weight) passed 200 mesh.

Photomicrographs of the three samples of each substance that tied for median place among all the samples in regard to surface mean diameter are shown in figure 3.

Particle Shape: Both materials tend to have particles of chunky shape. Though the two substances belong to different crystal systems, the fluoride is isotropic and the fluosilicate nearly so; that is, on the basis of optical properties they come very near being in the same system (cubic). This suggests the probability of a similarity in particle shape, and microscopic observations on a large number of samples indicated that there was no insecticidally important difference in shape.

Bulkiness: A comparison as to bulkiness is afforded by the porosities obtained during compaction for airpermeation observations. The porosity range of the middle two-thirds of the samples for the fluosilicates was 42 to 50 per cent, and for the fluorides, 51 to 60 per cent.

Lumpiness: All the fluoride samples were lump-free, but the majority of the fluosilicates were lumpy. In the latter material 39 per cent of the samples were lump-free, 16 per cent were very to extremely lumpy, and the remaining 45 per cent were intermediate.

Conclusions

It is evident that most of the sodium fluoride and sodium fluosilicate available commercially is of a satisfactory degree of purity for insecticidal use. For dusting and similar uses the fluosilicate is physically inferior because of relative coarseness and lumpiness, but these defects may be found capable of correction in manufacture. These physical differences should always be eliminated in any entomological tests that are used as a basis for judging the relative efficacies of the two substances.

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Insect Repellents

(From Page 105)

the post-war market. The Office of the Surgeon General of the War Department, the Bureau of Standards and manufacturers have been working in close cooperation to produce genuine repellents. At the present time, the Army is particularly interested in three repellents. One is produced by National Carbon Co. and known only as "Formula 612." "Indalone," which is produced by U. S. Industrial Chemicals, Inc., is being packaged by the Skol Co., New York. "Indalone" chemically is alpha-alpha-dimethyl-prime-carbobutoxy-dihydro-gamma-pyrone, or butylmesityl-oxide-oxalate. The third type is based on dimethyl-phthalate now used in concentrated form, and patented and packaged by Stanco, New York, for insect repellent use. Skol's "Indalone" runs about the same in price as "Formula 612," in the neighborhood of 16 cents per two-ounce bottle, while the dimethyl phthalate of Stanco is said to sell about one-third less.

Both dimethyl phthalate and "Indalone" are being purchased by the Army in concentrated form to be applied directly. They were formerly made up in a diluted form. However, the Army is taking them in concentrated form to save shipping space and for the greatest possible effectiveness for the longest period of time in use. In addition, the soldier carrying a 70-pound pack has all he can do to handle a two-ounce bottle besides, in case the small quantity of the individual unit needs explaining.

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... back to earth!

WHEN your business comes "back to earth" after the war, what kind of a landing will it make? Will it be prepared to face the sharp realities of a post-war world, — or will it be unprepared and hit with a thud? Regular advertising now should help to soften the landing then, — help to smooth over the change when it comes, — help to keep your customers, both old and new, remembering who you are and what you sell.

If you want to avoid as much as possible the effects of those post-war "sharp realities," particularly in the field of soap products, insecticides, disinfectants, chemical specialties, and allied products, we recommend highly regular advertising now in

SOAP and Sanitary Chemicals 254 WEST 31st STREET NEW YORK

Member Audit Bureau of Circulations

Tale Ends

SAID a WPB division head recently in answer to criticism from his industry: "The industry forgets that the job of WPB is not to protect manufacturers' interests in Washington, but is to direct industrial facilities so that they may be of maximum use in winning the war." The point is well taken because manufacturers are prone to forget the primary function of WPB. But, at the same time, if WPB hamstrings any industry, its value to the war effort may be seriously reduced. Let's remember that also!

To reduce cross-hauling, prevent waste and hardships on manufacturers, WPB appears to be easing its rigid rules somewhat in the handling of returnable and second-hand steel drum problems for chemical and allied products. Greater WPB tolerance of practices not exactly in line with a rigid interpretation of regulations, but based on recent practical experience, is noted.

The present concerted drive to require country-wide coloration of insecticide poisons is not likely to be stopped now. Sub-rosa opposition of the past several years will probably be ridden down as a result of the united efforts of law enforcement and public health officials, both federal and local.

Any kind of glass bottle standardization for insect sprays, polishes, waxes, cleaners, etc. is "out the window" as far as 1943 is concerned. WPB is now really attacking the problem with a view to setting up standards later this year which will become effective in 1944.

If the present rate of personnel turn-over at WPB and OPA in Washington continues, the end of 1943 is likely to see an entirely new crew running the show.

For High Grade Soaps

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FROM

TANK CARS . DRUMS

Liquid Solid Flake

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Ground Lump

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that we are now in a position to offer Methyl Acetophenone for immediate delivery—from stock—at a new low price.

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